

**WHAT IS CLAIMED IS DESCRIBED BELOW:**

1. A compound, comprising: a targeting moiety and a chelator, wherein the targeting moiety is bound to the chelator, is a indazole nonpeptide, and binds to a receptor that is upregulated during angiogenesis and the compound has 0-1 linking groups between the targeting moiety and chelator.

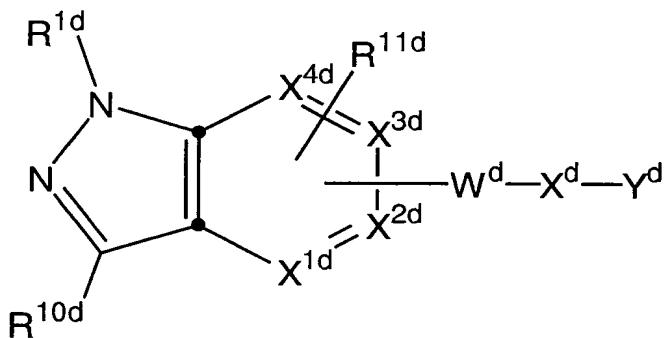
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2. A compound according to Claim 1, wherein the receptor is the integrin  $\alpha_v\beta_3$  or  $\alpha_v\beta_5$  and the compound is of the formula:

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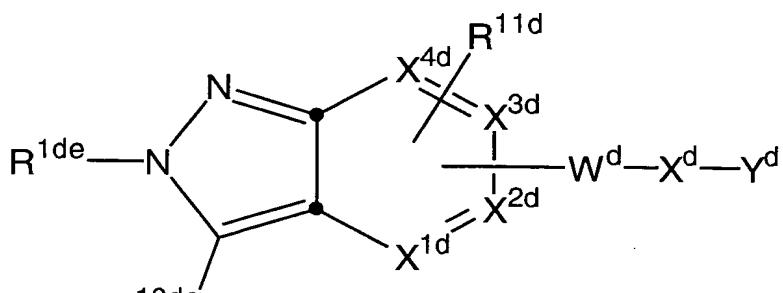
$(Q)_d-L_n-C_h$  or  $(Q)_d-L_n-(C_h)_d$

15 wherein,  $Q$  is independently a compound of Formula (Ia) or (Ib):



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(Ia)



(Ib)

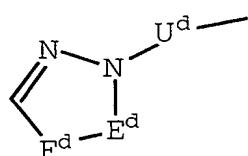
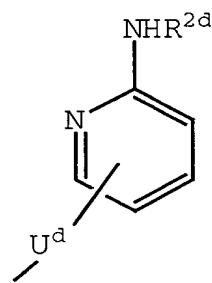
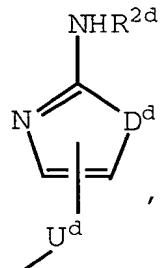
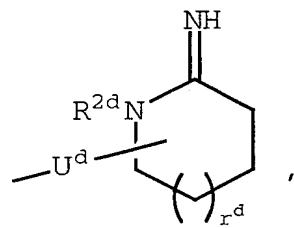
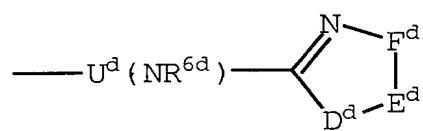
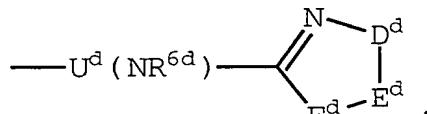
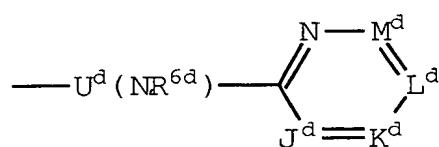
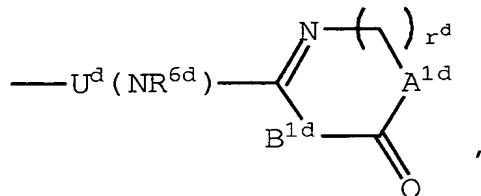
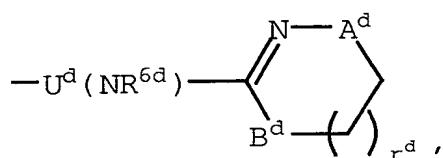
including stereoisomeric forms thereof, or mixtures of stereoisomeric forms thereof, or pharmaceutically acceptable salt or prodrug forms thereof wherein:

5     $X^{1d}$  is N, CH, C- $W^d$ - $X^d$ - $Y^d$ , or C- $L_n$ ;  
       $X^{2d}$  is N, CH, or C- $W^d$ - $X^d$ - $Y^d$ ;  
       $X^{3d}$  is N, CR<sup>11d</sup>, or C- $W^d$ - $X^d$ - $Y^d$ ;  
       $X^{4d}$  is N or CR<sup>11d</sup>;

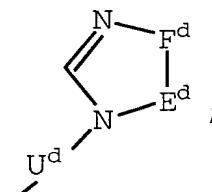
10    provided that when  $R^{1d}$  is  $R^{1de}$  then one of  $X^{1d}$  and  $X^{2d}$  is C- $W^d$ - $X^d$ - $Y^d$ , and when  $R^{10d}$  is  $R^{1de}$  then  $X^{3d}$  is C- $W^d$ - $X^d$ - $Y^d$ ;

15     $R^{1d}$  is selected from:  $R^{1de}$ , C<sub>1</sub>-C<sub>6</sub> alkyl substituted with 0-1  $R^{15d}$  or 0-1  $R^{21d}$ , C<sub>3</sub>-C<sub>6</sub> alkenyl substituted with 0-1  $R^{15d}$  or 0-1  $R^{21d}$ , C<sub>3</sub>-C<sub>7</sub> cycloalkyl substituted with 0-1  $R^{15d}$  or 0-1  $R^{21d}$ , C<sub>4</sub>-C<sub>11</sub> cycloalkylalkyl substituted with 0-1  $R^{15d}$  or 0-1  $R^{21d}$ , aryl substituted with 0-1  $R^{15d}$  or 0-2  $R^{11d}$  or 0-1  $R^{21d}$ , and 20 aryl(C<sub>1</sub>-C<sub>6</sub> alkyl)- substituted with 0-1  $R^{15d}$  or 0-2  $R^{11d}$  or 0-1  $R^{21d}$ ;

R<sup>1de</sup> is selected from:



or



5

$A^d$  and  $B^d$  are independently  $-\text{CH}_2-$ ,  $-\text{O}-$ ,  $-\text{N}(\text{R}^{2d})-$ , or  $-\text{C}(=\text{O})-$ ;

$A^{1d}$  and  $B^{1d}$  are independently  $-CH_2-$  or  $-N(R^{3d})-;$

$D^d$  is  $-N(R^{2d})-$ ,  $-O-$ ,  $-S-$ ,  $-C(=O)-$  or  $-SO_2-;$

5  $E^d-F^d$  is  $-C(R^{4d})=C(R^{5d})-$ ,  $-N=C(R^{4d})-$ ,  $-C(R^{4d})=N-$ , or  
 $-C(R^{4d})_2C(R^{5d})_2-$ ;

$J^d$ ,  $K^d$ ,  $L^d$  and  $M^d$  are independently selected from  
 $-C(R^{4d})-$ ,  $-C(R^{5d})-$  and  $-N-$ , provided that at least  
10 one of  $J^d$ ,  $K^d$ ,  $L^d$  and  $M^d$  is not  $-N-$ ;

$R^{2d}$  is selected from: H,  $C_1-C_6$  alkyl,  $(C_1-C_6$   
alkyl)carbonyl,  $(C_1-C_6$  alkoxy)carbonyl;  $(C_1-C_6$   
alkyl)aminocarbonyl,  $C_3-C_6$  alkenyl,  $C_3-C_7$  cycloalkyl,  
15  $C_4-C_{11}$  cycloalkylalkyl, aryl, heteroaryl( $C_1-C_6$   
alkyl)carbonyl, heteroarylcarbonyl,  
aryl( $C_1-C_6$  alkyl)-,  $(C_1-C_6$  alkyl)carbonyl-,  
arylcarbonyl,  $C_1-C_6$  alkylsulfonyl, arylsulfonyl,  
aryl( $C_1-C_6$  alkyl)sulfonyl, heteroarylsulfonyl,  
20 heteroaryl( $C_1-C_6$  alkyl)sulfonyl, aryloxycarbonyl, and  
aryl( $C_1-C_6$  alkoxy)carbonyl, wherein said aryl groups  
are substituted with 0-2 substituents selected from  
the group:  $C_1-C_4$  alkyl,  $C_1-C_4$  alkoxy, halo,  $CF_3$ , and  
nitro;

25  $R^{3d}$  is selected from: H,  $C_1-C_6$  alkyl,  $C_3-C_7$  cycloalkyl,  
 $C_4-C_{11}$  cycloalkylalkyl, aryl, aryl( $C_1-C_6$  alkyl)-, and  
heteroaryl( $C_1-C_6$  alkyl)-;

30  $R^{4d}$  and  $R^{5d}$  are independently selected from: H,  $C_1-C_4$   
alkoxy,  $NR^{2d}R^{3d}$ , halogen,  $NO_2$ ,  $CN$ ,  $CF_3$ ,  $C_1-C_6$  alkyl,  
 $C_3-C_6$  alkenyl,  $C_3-C_7$  cycloalkyl,  $C_4-C_{11}$   
cycloalkylalkyl, aryl, aryl( $C_1-C_6$  alkyl)-,  $(C_1-C_6$   
alkyl)carbonyl,  $(C_1-C_6$  alkoxy)carbonyl, and  
35 arylcarbonyl, or

alternatively, when substituents on adjacent atoms, R<sup>4d</sup> and R<sup>5d</sup> can be taken together with the carbon atoms to which they are attached to form a 5-7 membered carbocyclic or 5-7 membered heterocyclic aromatic or non-aromatic ring system, said carbocyclic or heterocyclic ring being optionally substituted with 0-2 groups selected from: C<sub>1</sub>-C<sub>4</sub> alkyl, C<sub>1</sub>-C<sub>4</sub> alkoxy, halo, cyano, amino, CF<sub>3</sub>, and NO<sub>2</sub>;

10 U<sup>d</sup> is selected from:

- (CH<sub>2</sub>)<sub>n</sub><sup>d</sup>-,

- (CH<sub>2</sub>)<sub>n</sub><sup>d</sup>(CR<sup>7d</sup>=CR<sup>8d</sup>)(CH<sub>2</sub>)<sub>m</sub><sup>d</sup>-,

- (CH<sub>2</sub>)<sub>n</sub><sup>d</sup>(C≡C)(CH<sub>2</sub>)<sub>m</sub><sup>d</sup>-,

- (CH<sub>2</sub>)<sub>t</sub><sup>d</sup>Q(CH<sub>2</sub>)<sub>m</sub><sup>d</sup>-,

15 - (CH<sub>2</sub>)<sub>n</sub><sup>d</sup>O(CH<sub>2</sub>)<sub>m</sub><sup>d</sup>-,

- (CH<sub>2</sub>)<sub>n</sub><sup>d</sup>N(R<sup>6d</sup>)(CH<sub>2</sub>)<sub>m</sub><sup>d</sup>-,

- (CH<sub>2</sub>)<sub>n</sub><sup>d</sup>C(=O)(CH<sub>2</sub>)<sub>m</sub><sup>d</sup>-,

- (CH<sub>2</sub>)<sub>n</sub><sup>d</sup>(C=O)N(R<sup>6d</sup>)(CH<sub>2</sub>)<sub>m</sub><sup>d</sup>-

- (CH<sub>2</sub>)<sub>n</sub><sup>d</sup>N(R<sup>6d</sup>)(C=O)(CH<sub>2</sub>)<sub>m</sub><sup>d</sup>-, and

20 - (CH<sub>2</sub>)<sub>n</sub><sup>d</sup>S(O)<sub>p</sub><sup>d</sup>(CH<sub>2</sub>)<sub>m</sub><sup>d</sup>-;

wherein one or more of the methylene groups in U<sup>d</sup> is optionally substituted with R<sup>7d</sup>;

Q<sup>d</sup> is selected from 1,2-cycloalkylene, 1,2-phenylene,

25 1,3-phenylene, 1,4-phenylene, 2,3-pyridinylene, 3,4-pyridinylene, 2,4-pyridinylene, and 3,4-pyridazinylene;

R<sup>6d</sup> is selected from: H, C<sub>1</sub>-C<sub>4</sub> alkyl, and benzyl;

30

R<sup>7d</sup> and R<sup>8d</sup> are independently selected from: H, C<sub>1</sub>-C<sub>6</sub> alkyl, C<sub>3</sub>-C<sub>7</sub> cycloalkyl, C<sub>4</sub>-C<sub>11</sub> cycloalkylalkyl, aryl, aryl(C<sub>1</sub>-C<sub>6</sub> alkyl)-, and heteroaryl(C<sub>0</sub>-C<sub>6</sub> alkyl)-;

35

$R^{10d}$  is selected from: H,  $R^{1de}$ ,  $C_1$ - $C_4$  alkoxy substituted with 0-1  $R^{21d}$ ,  $N(R^{6d})_2$ , halogen,  $NO_2$ , CN,  $CF_3$ ,  $CO_2R^{17d}$ ,  $C(=O)R^{17d}$ ,  $CONR^{17d}R^{20d}$ ,  $-SO_2R^{17d}$ ,

5  $-SO_2NR^{17d}R^{20d}$ ,  $C_1$ - $C_6$  alkyl substituted with 0-1  $R^{15d}$  or 0-1  $R^{21d}$ ,  $C_3$ - $C_6$  alkenyl substituted with 0-1  $R^{15d}$  or 0-1  $R^{21d}$ ,  $C_3$ - $C_7$  cycloalkyl substituted with 0-1  $R^{15d}$  or 0-1  $R^{21d}$ ,  $C_4$ - $C_{11}$  cycloalkylalkyl substituted with 0-1  $R^{15d}$  or 0-1  $R^{21d}$ , aryl substituted with 0-1  $R^{15d}$  or 0-2  $R^{11d}$  or 0-1  $R^{21d}$ , and aryl( $C_1$ - $C_6$  alkyl)-10 substituted with 0-1  $R^{15d}$  or 0-2  $R^{11d}$  or 0-1  $R^{21d}$ ;

$R^{10de}$  is selected from: H,  $C_1$ - $C_4$  alkoxy substituted with 0-1  $R^{21d}$ ,  $N(R^{6d})_2$ , halogen,  $NO_2$ , CN,  $CF_3$ ,  $CO_2R^{17d}$ ,  $C(=O)R^{17d}$ ,  $CONR^{17d}R^{20d}$ ,  $-SO_2R^{17d}$ ,  $-SO_2NR^{17d}R^{20d}$ ,  $C_1$ - $C_6$

15 alkyl substituted with 0-1  $R^{15d}$  or 0-1  $R^{21d}$ ,  $C_3$ - $C_6$  alkenyl substituted with 0-1  $R^{15d}$  or 0-1  $R^{21d}$ ,  $C_3$ - $C_7$  cycloalkyl substituted with 0-1  $R^{15d}$  or 0-1  $R^{21d}$ ,  $C_4$ - $C_{11}$  cycloalkylalkyl substituted with 0-1  $R^{15d}$  or 0-1  $R^{21d}$ , aryl substituted with 0-1  $R^{15d}$  or 0-2  $R^{11d}$ 20 or 0-1  $R^{21d}$ , and aryl( $C_1$ - $C_6$  alkyl)- substituted with 0-1  $R^{15d}$  or 0-2  $R^{11d}$  or 0-1  $R^{21d}$ ;

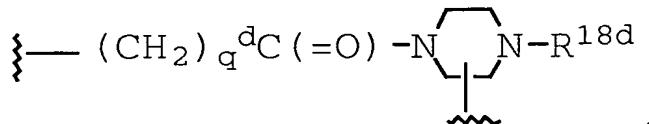
$R^{11d}$  is selected from H, halogen,  $CF_3$ , CN,  $NO_2$ , hydroxy,  $NR^{2d}R^{3d}$ ,  $C_1$ - $C_4$  alkyl substituted with 0-1  $R^{21d}$ ,  $C_1$ - $C_4$

25 alkoxy substituted with 0-1  $R^{21d}$ , aryl substituted with 0-1  $R^{21d}$ , aryl( $C_1$ - $C_6$  alkyl)- substituted with 0-1  $R^{21d}$ , ( $C_1$ - $C_4$  alkoxy)carbonyl substituted with 0-1  $R^{21d}$ , ( $C_1$ - $C_4$  alkyl)carbonyl substituted with 0-1  $R^{21d}$ ,  $C_1$ - $C_4$  alkylsulfonyl substituted with 0-1  $R^{21d}$ , and  $C_1$ - $C_4$  alkylaminosulfonyl substituted with 0-1  $R^{21d}$ ;

$W^d$  is selected from:

-  $(C(R^{12d})_2)_q^dC(=O)N(R^{13d})-$ , and  
-  $C(=O)-N(R^{13d})-(C(R^{12d})_2)_q^d-$ ;

$x^d$  is  $-C(R^{12d})(R^{14d})-C(R^{12d})(R^{15d})-$ ; or  
 alternatively,  $w^d$  and  $x^d$  can be taken together to be



5

$R^{12d}$  is selected from H, halogen, C<sub>1</sub>-C<sub>6</sub> alkyl, C<sub>2</sub>-C<sub>6</sub> alkenyl, C<sub>2</sub>-C<sub>6</sub> alkynyl, C<sub>3</sub>-C<sub>7</sub> cycloalkyl, C<sub>4</sub>-C<sub>10</sub> cycloalkylalkyl, (C<sub>1</sub>-C<sub>4</sub> alkyl)carbonyl, aryl, and aryl(C<sub>1</sub>-C<sub>6</sub> alkyl)-;

$R^{13d}$  is selected from H, C<sub>1</sub>-C<sub>6</sub> alkyl, C<sub>3</sub>-C<sub>7</sub> cycloalkylmethyl, and aryl(C<sub>1</sub>-C<sub>6</sub> alkyl)-;

15  $R^{14d}$  is selected from:

H, C<sub>1</sub>-C<sub>6</sub> alkylthio(C<sub>1</sub>-C<sub>6</sub> alkyl)-, aryl(C<sub>1</sub>-C<sub>10</sub> alkylthioalkyl)-, aryl(C<sub>1</sub>-C<sub>10</sub> alkoxyalkyl)-, C<sub>1</sub>-C<sub>10</sub> alkyl, C<sub>1</sub>-C<sub>10</sub> alkoxyalkyl, C<sub>1</sub>-C<sub>6</sub> hydroxyalkyl, C<sub>2</sub>-C<sub>10</sub> alkenyl, C<sub>2</sub>-C<sub>10</sub> alkynyl, C<sub>3</sub>-C<sub>10</sub> cycloalkyl, C<sub>3</sub>-C<sub>10</sub> cycloalkylalkyl, aryl(C<sub>1</sub>-C<sub>6</sub> alkyl)-, heteroaryl(C<sub>1</sub>-C<sub>6</sub> alkyl)-, aryl, heteroaryl, CO<sub>2</sub>R<sup>17d</sup>, C(=O)R<sup>17d</sup>, and CONR<sup>17d</sup>R<sup>20d</sup>, provided that any of the above alkyl, cycloalkyl, aryl or heteroaryl groups may be unsubstituted or substituted independently with 0-1 R<sup>16d</sup> or 0-2 R<sup>11d</sup>;

$R^{15d}$  is selected from:

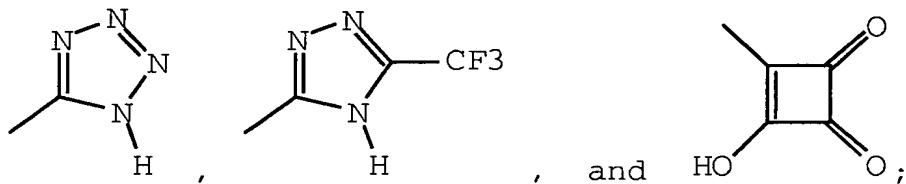
H, R<sup>16d</sup>, C<sub>1</sub>-C<sub>10</sub> alkyl, C<sub>1</sub>-C<sub>10</sub> alkoxyalkyl, C<sub>1</sub>-C<sub>10</sub> alkylaminoalkyl, C<sub>1</sub>-C<sub>10</sub> dialkylaminoalkyl, (C<sub>1</sub>-C<sub>10</sub> alkyl)carbonyl, aryl(C<sub>1</sub>-C<sub>6</sub> alkyl)carbonyl, C<sub>1</sub>-C<sub>10</sub> alkenyl, C<sub>1</sub>-C<sub>10</sub> alkynyl, C<sub>3</sub>-C<sub>10</sub> cycloalkyl, C<sub>3</sub>-C<sub>10</sub> cycloalkylalkyl, aryl(C<sub>1</sub>-C<sub>6</sub> alkyl)-, heteroaryl(C<sub>1</sub>-C<sub>6</sub> alkyl)-, aryl, heteroaryl, CO<sub>2</sub>R<sup>17d</sup>, C(=O)R<sup>17d</sup>, CONR<sup>17d</sup>R<sup>20d</sup>, SO<sub>2</sub>R<sup>17d</sup>, and SO<sub>2</sub>NR<sup>17d</sup>R<sup>20d</sup>,

provided that any of the above alkyl, cycloalkyl, aryl or heteroaryl groups may be unsubstituted or substituted independently with 0-2 R<sup>11d</sup>;

5 Y<sup>d</sup> is selected from:

-COR<sup>19d</sup>, -SO<sub>3</sub>H, -PO<sub>3</sub>H, tetrazolyl, -CONHNHSO<sub>2</sub>CF<sub>3</sub>, -CONHSO<sub>2</sub>R<sup>17d</sup>, -CONHSO<sub>2</sub>NHR<sup>17d</sup>, -NHCOCF<sub>3</sub>, -NHCONHSO<sub>2</sub>R<sup>17d</sup>, -NHSO<sub>2</sub>R<sup>17d</sup>, -OPO<sub>3</sub>H<sub>2</sub>, -OSO<sub>3</sub>H, -PO<sub>3</sub>H<sub>2</sub>, -SO<sub>3</sub>H, -SO<sub>2</sub>NHCOR<sup>17d</sup>, -SO<sub>2</sub>NHCO<sub>2</sub>R<sup>17d</sup>,

10



R<sup>16d</sup> is selected from:

-N(R<sup>20d</sup>)-C(=O)-O-R<sup>17d</sup>,  
 15 -N(R<sup>20d</sup>)-C(=O)-R<sup>17d</sup>,  
 -N(R<sup>20d</sup>)-C(=O)-NH-R<sup>17d</sup>,  
 -N(R<sup>20d</sup>)SO<sub>2</sub>-R<sup>17d</sup>, and  
 -N(R<sup>20d</sup>)SO<sub>2</sub>-NR<sup>20d</sup>R<sup>17d</sup>;

20 R<sup>17d</sup> is selected from:

C<sub>1</sub>-C<sub>10</sub> alkyl optionally substituted with a bond to L<sub>n</sub>, C<sub>3</sub>-C<sub>11</sub> cycloalkyl optionally substituted with a bond to L<sub>n</sub>, aryl(C<sub>1</sub>-C<sub>6</sub> alkyl)- optionally substituted with a bond to L<sub>n</sub>, (C<sub>1</sub>-C<sub>6</sub> alkyl)aryl optionally substituted with a bond to L<sub>n</sub>, heteroaryl(C<sub>1</sub>-C<sub>6</sub> alkyl)- optionally substituted with a bond to L<sub>n</sub>, (C<sub>1</sub>-C<sub>6</sub> alkyl)heteroaryl optionally substituted with a bond to L<sub>n</sub>, biaryl(C<sub>1</sub>-C<sub>6</sub> alkyl)- optionally substituted with a bond to L<sub>n</sub>, heteroaryl optionally substituted with a bond to L<sub>n</sub>, aryl optionally substituted with a bond to L<sub>n</sub>, biaryl optionally substituted with a bond to L<sub>n</sub>, and a bond to L<sub>n</sub>, wherein said aryl, biaryl or heteroaryl groups are

also optionally substituted with 0-3 substituents selected from the group consisting of: C<sub>1</sub>-C<sub>4</sub> alkyl, C<sub>1</sub>-C<sub>4</sub> alkoxy, aryl, heteroaryl, halo, cyano, amino, CF<sub>3</sub>, and NO<sub>2</sub>;

5

R<sup>18d</sup> is selected from:

-H,

-C(=O)-O-R<sup>17d</sup>,

-C(=O)-R<sup>17d</sup>,

10 -C(=O)-NH-R<sup>17d</sup>,

-SO<sub>2</sub>-R<sup>17d</sup>, and

-SO<sub>2</sub>-NR<sup>20d</sup>R<sup>17d</sup>;

R<sup>19d</sup> is selected from: hydroxy, C<sub>1</sub>-C<sub>10</sub> alkyloxy,

15 C<sub>3</sub>-C<sub>11</sub> cycloalkyloxy, aryloxy, aryl(C<sub>1</sub>-C<sub>6</sub> alkoxy)-,

C<sub>3</sub>-C<sub>10</sub> alkylcarbonyloxyalkyloxy, C<sub>3</sub>-C<sub>10</sub>

alkoxycarbonyloxyalkyloxy,

C<sub>2</sub>-C<sub>10</sub> alkoxy carbonylalkyloxy,

C<sub>5</sub>-C<sub>10</sub> cycloalkylcarbonyloxyalkyloxy,

20 C<sub>5</sub>-C<sub>10</sub> cycloalkoxycarbonyloxyalkyloxy,

C<sub>5</sub>-C<sub>10</sub> cycloalkoxycarbonylalkyloxy,

C<sub>7</sub>-C<sub>11</sub> aryloxy carbonylalkyloxy,

C<sub>8</sub>-C<sub>12</sub> aryloxy carbonyloxyalkyloxy,

C<sub>8</sub>-C<sub>12</sub> arylcarbonyloxyalkyloxy,

25 C<sub>5</sub>-C<sub>10</sub> alkoxyalkylcarbonyloxyalkyloxy,

C<sub>5</sub>-C<sub>10</sub> (5-alkyl-1,3-dioxa-cyclopenten-2-one-

yl)methyloxy, C<sub>10</sub>-C<sub>14</sub> (5-aryl-1,3-dioxa-cyclopenten-

2-one-yl)methyloxy, and

(R<sup>11d</sup>)(R<sup>12d</sup>)N-(C<sub>1</sub>-C<sub>10</sub> alkoxy)-;

30

R<sup>20d</sup> is selected from: H, C<sub>1</sub>-C<sub>6</sub> alkyl, C<sub>3</sub>-C<sub>7</sub> cycloalkyl,

C<sub>4</sub>-C<sub>11</sub> cycloalkylalkyl, aryl, aryl(C<sub>1</sub>-C<sub>6</sub> alkyl)-, and

heteroaryl(C<sub>1</sub>-C<sub>6</sub> alkyl)-;

35 R<sup>21d</sup> is selected from: COOH and NR<sup>6d</sup><sub>2</sub>;

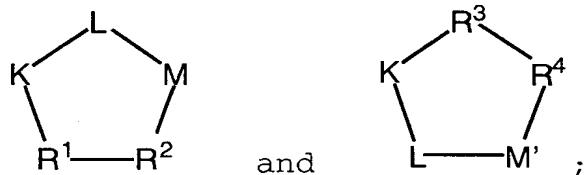
$m^d$  is 0-4;  
 $n^d$  is 0-4;  
 $t^d$  is 0-4;  
 $p^d$  is 0-2;  
5  $q^d$  is 0-2; and  
 $r^d$  is 0-2;

with the following provisos:

10 (1)  $t^d$ ,  $n^d$ ,  $m^d$  and  $q^d$  are chosen such that the number of atoms connecting  $R^{1d}$  and  $Y^d$  is in the range of 10-14;  
 and  
 (2)  $n^d$  and  $m^d$  are chosen such that the value of  $n^d$  plus  
 $m^d$  is greater than one unless  $U^d$  is  
 $-(CH_2)_t Q (CH_2)_m -$ ;

15

or Q is a peptide selected from the group:



$R^1$  is L-valine, D-valine or L-lysine optionally

20 substituted on the  $\epsilon$  amino group with a bond to  $L_n$ ;

$R^2$  is L-phenylalanine, D-phenylalanine,  
 D-1-naphthylalanine, 2-aminothiazole-4-acetic acid  
 or tyrosine, the tyrosine optionally substituted on  
 25 the hydroxy group with a bond to  $L_n$ ;

$R^3$  is D-valine;

R<sup>4</sup> is D-tyrosine substituted on the hydroxy group with a bond to L<sub>n</sub>;

provided that one of R<sup>1</sup> and R<sup>2</sup> in each Q is substituted with a bond to L<sub>n</sub>, and further provided that when R<sup>2</sup> is 2-aminothiazole-4-acetic acid, K is N-methylarginine;

provided that at least one Q is a compound of Formula (Ia) or (Ib);

d is selected from 1, 2, 3, 4, 5, 6, 7, 8, 9, and 10;

d' is 1-100;

L<sub>n</sub> is a linking group having the formula:

$$((W)_h - (CR^{6a}R^{7a})_g)_x - (Z)_k - ((CR^{6a}R^{7a})_{g'})_{x'} - (W)_{h'};$$

W is independently selected at each occurrence from the group: O, S, NH, NHC(=O), C(=O)NH, NR<sup>8</sup>C(=O), C(=O)N R<sup>8</sup>, C(=O)O, OC(=O), NHC(=S)NH, NHC(=O)NH, SO<sub>2</sub>, SO<sub>2</sub>NH, (OCH<sub>2</sub>CH<sub>2</sub>)<sub>s</sub>, (CH<sub>2</sub>CH<sub>2</sub>O)<sub>s'</sub>, (OCH<sub>2</sub>CH<sub>2</sub>CH<sub>2</sub>)<sub>s''</sub>, (CH<sub>2</sub>CH<sub>2</sub>CH<sub>2</sub>O)<sub>t</sub>, and (aa)<sub>t'</sub>;

aa is independently at each occurrence an amino acid;

Z is selected from the group: aryl substituted with 0-3 R<sup>10</sup>, C<sub>3-10</sub> cycloalkyl substituted with 0-3 R<sup>10</sup>, and a 5-10 membered heterocyclic ring system containing 1-4 heteroatoms independently selected from N, S, and O and substituted with 0-3 R<sup>10</sup>;

R<sup>6</sup>, R<sup>6a</sup>, R<sup>7</sup>, R<sup>7a</sup>, and R<sup>8</sup> are independently selected at each occurrence from the group: H, =O, COOH, SO<sub>3</sub>H, PO<sub>3</sub>H, C<sub>1-C5</sub> alkyl substituted with 0-3 R<sup>10</sup>, aryl substituted with 0-3 R<sup>10</sup>, benzyl substituted with 0-3 R<sup>10</sup>, and C<sub>1-C5</sub> alkoxy substituted with 0-3 R<sup>10</sup>,

NHC(=O)R<sup>11</sup>, C(=O)NHR<sup>11</sup>, NHC(=O)NHR<sup>11</sup>, NHR<sup>11</sup>, R<sup>11</sup>, and a bond to Ch;

R<sup>10</sup> is independently selected at each occurrence from the  
5 group: a bond to Ch, COOR<sup>11</sup>, C(=O)NHR<sup>11</sup>, NHC(=O)R<sup>11</sup>, OH, NHR<sup>11</sup>, SO<sub>3</sub>H, PO<sub>3</sub>H, -OPO<sub>3</sub>H<sub>2</sub>, -OSO<sub>3</sub>H, aryl substituted with 0-3 R<sup>11</sup>, C<sub>1-5</sub> alkyl substituted with 0-1 R<sup>12</sup>, C<sub>1-5</sub> alkoxy substituted with 0-1 R<sup>12</sup>, and a 10 5-10 membered heterocyclic ring system containing 1-4 heteroatoms independently selected from N, S, and O and substituted with 0-3 R<sup>11</sup>;

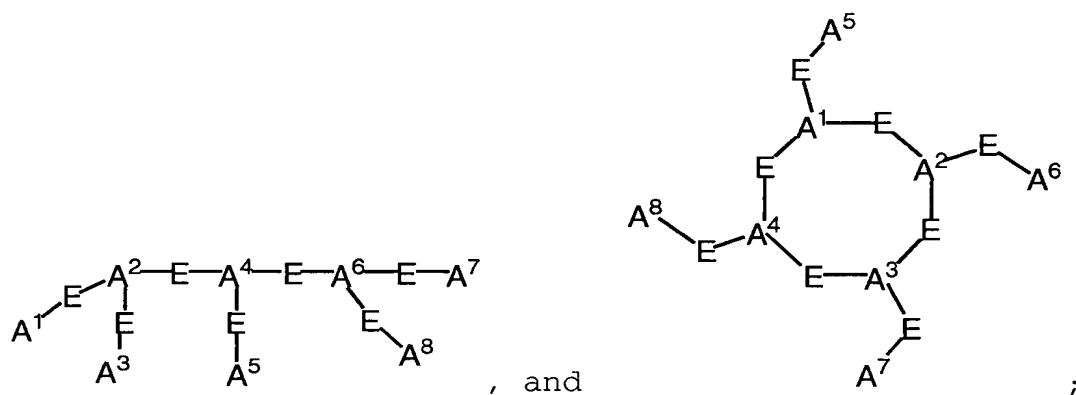
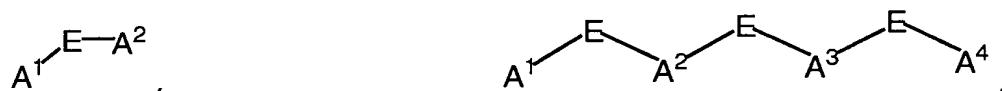
R<sup>11</sup> is independently selected at each occurrence from the  
15 group: H, alkyl substituted with 0-1 R<sup>12</sup>, aryl substituted with 0-1 R<sup>12</sup>, a 5-10 membered heterocyclic ring system containing 1-4 heteroatoms independently selected from N, S, and O and substituted with 0-1 R<sup>12</sup>, C<sub>3-10</sub> cycloalkyl substituted with 0-1 R<sup>12</sup>, polyalkylene glycol substituted with 0-1 R<sup>12</sup>, carbohydrate substituted with 0-1 R<sup>12</sup>, cyclodextrin substituted with 0-1 R<sup>12</sup>, 20 amino acid substituted with 0-1 R<sup>12</sup>, polycarboxyalkyl substituted with 0-1 R<sup>12</sup>, polyazaalkyl substituted with 0-1 R<sup>12</sup>, and peptide substituted with 0-1 R<sup>12</sup>, wherein the peptide is comprised of 2-10 amino acids, 3,6-O-disulfo-B-D-galactopyranosyl, 25 bis(phosphonomethyl)glycine, and a bond to Ch;

R<sup>12</sup> is a bond to Ch;  
30 k is selected from 0, 1, and 2;  
h is selected from 0, 1, and 2;  
h' is selected from 0, 1, and 2;  
g is selected from 0, 1, 2, 3, 4, 5, 6, 7, 8, 9, and 10;  
35 g' is selected from 0, 1, 2, 3, 4, 5, 6, 7, 8, 9, and 10;  
s is selected from 0, 1, 2, 3, 4, 5, 6, 7, 8, 9, and 10;

s' is selected from 0, 1, 2, 3, 4, 5, 6, 7, 8, 9, and 10;  
 s" is selected from 0, 1, 2, 3, 4, 5, 6, 7, 8, 9, and 10;  
 t is selected from 0, 1, 2, 3, 4, 5, 6, 7, 8, 9, and 10;  
 t' is selected from 0, 1, 2, 3, 4, 5, 6, 7, 8, 9, and 10;  
 5 x is selected from 0, 1, 2, 3, 4, and 5;  
 x' is selected from 0, 1, 2, 3, 4, and 5;

Ch is a metal bonding unit having a formula selected from the group:

10



15  $A^1$ ,  $A^2$ ,  $A^3$ ,  $A^4$ ,  $A^5$ ,  $A^6$ ,  $A^7$ , and  $A^8$  are independently selected at each occurrence from the group:  $NR^{13}$ ,  $NR^{13}R^{14}$ , S, SH, S(Pg), O, OH,  $PR^{13}$ ,  $PR^{13}R^{14}$ ,  $P(O)R^{15}R^{16}$ , and a bond to  $L_n$ ;

20 E is a bond, CH, or a spacer group independently selected at each occurrence from the group: C<sub>1</sub>-C<sub>10</sub> alkyl substituted with 0-3 R<sup>17</sup>, aryl substituted with 0-3 R<sup>17</sup>, C<sub>3</sub>-10 cycloalkyl substituted with 0-3 R<sup>17</sup>, heterocyclo-C<sub>1</sub>-10 alkyl substituted with 0-3 R<sup>17</sup>,  
 25 wherein the heterocyclo group is a 5-10 membered heterocyclic ring system containing 1-4 heteroatoms independently selected from N, S, and O, C<sub>6</sub>-10

aryl-C<sub>1-10</sub> alkyl substituted with 0-3 R<sup>17</sup>, C<sub>1-10</sub> alkyl-C<sub>6-10</sub> aryl- substituted with 0-3 R<sup>17</sup>, and a 5-10 membered heterocyclic ring system containing 1-4 heteroatoms independently selected from N, S, and O and substituted with 0-3 R<sup>17</sup>;

R<sup>13</sup> and R<sup>14</sup> are each independently selected from the group: a bond to L<sub>n</sub>, hydrogen, C<sub>1-C10</sub> alkyl substituted with 0-3 R<sup>17</sup>, aryl substituted with 0-3 R<sup>17</sup>, C<sub>1-10</sub> cycloalkyl substituted with 0-3 R<sup>17</sup>, heterocyclo-C<sub>1-10</sub> alkyl substituted with 0-3 R<sup>17</sup>, wherein the heterocyclo group is a 5-10 membered heterocyclic ring system containing 1-4 heteroatoms independently selected from N, S, and O, C<sub>6-10</sub> aryl-C<sub>1-10</sub> alkyl substituted with 0-3 R<sup>17</sup>, C<sub>1-10</sub> alkyl-C<sub>6-10</sub> aryl- substituted with 0-3 R<sup>17</sup>, a 5-10 membered heterocyclic ring system containing 1-4 heteroatoms independently selected from N, S, and O and substituted with 0-3 R<sup>17</sup>, and an electron, provided that when one of R<sup>13</sup> or R<sup>14</sup> is an electron, then the other is also an electron;

alternatively, R<sup>13</sup> and R<sup>14</sup> combine to form =C(R<sup>20</sup>)(R<sup>21</sup>);

R<sup>15</sup> and R<sup>16</sup> are each independently selected from the group: a bond to L<sub>n</sub>, -OH, C<sub>1-C10</sub> alkyl substituted with 0-3 R<sup>17</sup>, C<sub>1-C10</sub> alkyl substituted with 0-3 R<sup>17</sup>, aryl substituted with 0-3 R<sup>17</sup>, C<sub>3-10</sub> cycloalkyl substituted with 0-3 R<sup>17</sup>, heterocyclo-C<sub>1-10</sub> alkyl substituted with 0-3 R<sup>17</sup>, wherein the heterocyclo group is a 5-10 membered heterocyclic ring system containing 1-4 heteroatoms independently selected from N, S, and O, C<sub>6-10</sub> aryl-C<sub>1-10</sub> alkyl substituted with 0-3 R<sup>17</sup>, C<sub>1-10</sub> alkyl-C<sub>6-10</sub> aryl- substituted with

0-3 R<sup>17</sup>, and a 5-10 membered heterocyclic ring system containing 1-4 heteroatoms independently selected from N, S, and O and substituted with 0-3 R<sup>17</sup>;

5

R<sup>17</sup> is independently selected at each occurrence from the group: a bond to L<sub>n</sub>, =O, F, Cl, Br, I, -CF<sub>3</sub>, -CN, -CO<sub>2</sub>R<sup>18</sup>, -C(=O)R<sup>18</sup>, -C(=O)N(R<sup>18</sup>)<sub>2</sub>, -CHO, -CH<sub>2</sub>OR<sup>18</sup>, -OC(=O)R<sup>18</sup>, -OC(=O)OR<sup>18a</sup>, -OR<sup>18</sup>, -OC(=O)N(R<sup>18</sup>)<sub>2</sub>,  
 10 -NR<sup>19</sup>C(=O)R<sup>18</sup>, -NR<sup>19</sup>C(=O)OR<sup>18a</sup>, -NR<sup>19</sup>C(=O)N(R<sup>18</sup>)<sub>2</sub>, -NR<sup>19</sup>SO<sub>2</sub>N(R<sup>18</sup>)<sub>2</sub>, -NR<sup>19</sup>SO<sub>2</sub>R<sup>18a</sup>, -SO<sub>3</sub>H, -SO<sub>2</sub>R<sup>18a</sup>, -SR<sup>18</sup>, -S(=O)R<sup>18a</sup>, -SO<sub>2</sub>N(R<sup>18</sup>)<sub>2</sub>, -N(R<sup>18</sup>)<sub>2</sub>, -NHC(=S)NHR<sup>18</sup>, =NOR<sup>18</sup>, NO<sub>2</sub>, -C(=O)NHOR<sup>18</sup>, -C(=O)NHNHR<sup>18</sup>R<sup>18a</sup>, -OCH<sub>2</sub>CO<sub>2</sub>H, 2-(1-morpholino)ethoxy, C<sub>1</sub>-C<sub>5</sub> alkyl, C<sub>2</sub>-C<sub>4</sub> alkenyl, C<sub>3</sub>-C<sub>6</sub> cycloalkyl, C<sub>3</sub>-C<sub>6</sub> cycloalkylmethyl, C<sub>2</sub>-C<sub>6</sub> alkoxyalkyl, aryl substituted with 0-2 R<sup>18</sup>, and a 5-10 membered heterocyclic ring system containing 1-4 heteroatoms independently selected from N, S, and O;

15

R<sup>18</sup>, R<sup>18a</sup>, and R<sup>19</sup> are independently selected at each occurrence from the group: a bond to L<sub>n</sub>, H, C<sub>1</sub>-C<sub>6</sub> alkyl, phenyl, benzyl, C<sub>1</sub>-C<sub>6</sub> alkoxy, halide, nitro, cyano, and trifluoromethyl;

20

Pg is a thiol protecting group;

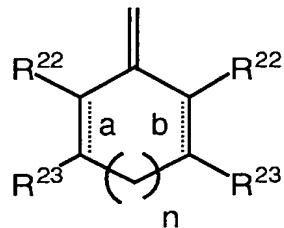
R<sup>20</sup> and R<sup>21</sup> are independently selected from the group: H, C<sub>1</sub>-C<sub>10</sub> alkyl, -CN, -CO<sub>2</sub>R<sup>25</sup>, -C(=O)R<sup>25</sup>, -C(=O)N(R<sup>25</sup>)<sub>2</sub>,

25

C<sub>2</sub>-C<sub>10</sub> 1-alkene substituted with 0-3 R<sup>23</sup>, C<sub>2</sub>-C<sub>10</sub> 1-alkyne substituted with 0-3 R<sup>23</sup>, aryl substituted with 0-3 R<sup>23</sup>, unsaturated 5-10 membered heterocyclic ring system containing 1-4 heteroatoms independently selected from N, S, and O and substituted with 0-3

$R^{23}$ , and unsaturated C<sub>3</sub>-10 carbocycle substituted with 0-3  $R^{23}$ ;

5 alternatively,  $R^{20}$  and  $R^{21}$ , taken together with the divalent carbon radical to which they are attached form:



10  $R^{22}$  and  $R^{23}$  are independently selected from the group: H,  $R^{24}$ , C<sub>1</sub>-C<sub>10</sub> alkyl substituted with 0-3  $R^{24}$ , C<sub>2</sub>-C<sub>10</sub> alkenyl substituted with 0-3  $R^{24}$ , C<sub>2</sub>-C<sub>10</sub> alkynyl substituted with 0-3  $R^{24}$ , aryl substituted with 0-3  $R^{24}$ , a 5-10 membered heterocyclic ring system containing 1-4 heteroatoms independently selected from N, S, and O and substituted with 0-3  $R^{24}$ , and C<sub>3</sub>-10 carbocycle substituted with 0-3  $R^{24}$ ;

15

15 alternatively,  $R^{22}$ ,  $R^{23}$  taken together form a fused aromatic or a 5-10 membered heterocyclic ring system containing 1-4 heteroatoms independently selected from N, S, and O;

20 alternatively,  $R^{22}$ ,  $R^{23}$  taken together form a fused aromatic or a 5-10 membered heterocyclic ring system containing 1-4 heteroatoms independently selected from N, S, and O;

25 **a** and **b** indicate the positions of optional double bonds and **n** is 0 or 1;

30  $R^{24}$  is independently selected at each occurrence from the group: =O, F, Cl, Br, I, -CF<sub>3</sub>, -CN, -CO<sub>2</sub>R<sup>25</sup>, -C(=O)R<sup>25</sup>, -C(=O)N(R<sup>25</sup>)<sub>2</sub>, -N(R<sup>25</sup>)<sub>3</sub><sup>+</sup>, -CH<sub>2</sub>OR<sup>25</sup>, -OC(=O)R<sup>25</sup>, -OC(=O)OR<sup>25a</sup>, -OR<sup>25</sup>, -OC(=O)N(R<sup>25</sup>)<sub>2</sub>, -NR<sup>26</sup>C(=O)R<sup>25</sup>, -NR<sup>26</sup>C(=O)OR<sup>25a</sup>, -NR<sup>26</sup>C(=O)N(R<sup>25</sup>)<sub>2</sub>,

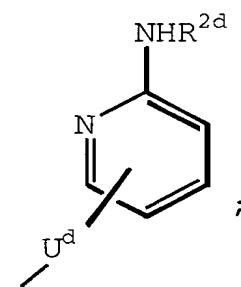
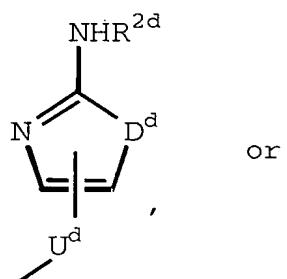
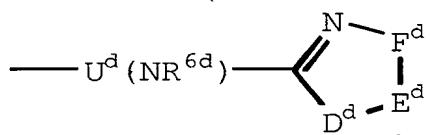
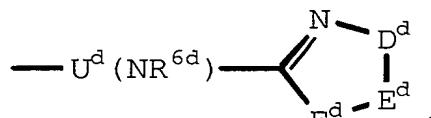
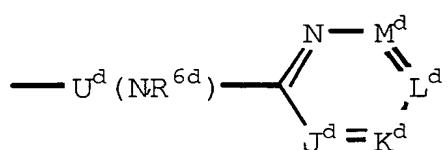
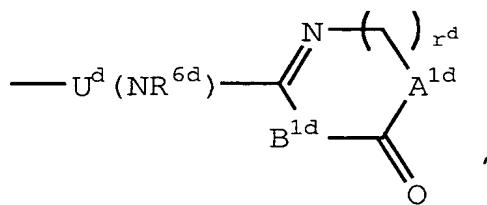
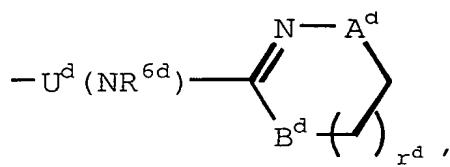
-NR<sup>26</sup>SO<sub>2</sub>N(R<sup>25</sup>)<sub>2</sub>, -NR<sup>26</sup>SO<sub>2</sub>R<sup>25a</sup>, -SO<sub>3</sub>H, -SO<sub>2</sub>R<sup>25a</sup>, -SR<sup>25</sup>,  
-S(=O)R<sup>25a</sup>, -SO<sub>2</sub>N(R<sup>25</sup>)<sub>2</sub>, -N(R<sup>25</sup>)<sub>2</sub>, =NOR<sup>25</sup>,  
-C(=O)NHOR<sup>25</sup>, -OCH<sub>2</sub>CO<sub>2</sub>H, and 2-(1-morpholino)ethoxy;  
and,

5

R<sup>25</sup>, R<sup>25a</sup>, and R<sup>26</sup> are each independently selected at each occurrence from the group: hydrogen and C<sub>1</sub>-C<sub>6</sub> alkyl.

10 3. A compound according to Claim 2, wherein:

R<sup>1de</sup> is selected from:



5  $A^d$  and  $B^d$  are independently  $-\text{CH}_2-$ ,  $-\text{O}-$ ,  $-\text{N}(\text{R}^{2d})-$ , or  $-\text{C}(\text{=O})-$ ;

$A^{1d}$  and  $B^{1d}$  are independently  $-\text{CH}_2-$  or  $-\text{N}(\text{R}^{3d})-$ ;

$D^d$  is  $-N(R^{2d})-$ ,  $-O-$ ,  $-S-$ ,  $-C(=O)-$  or  $-SO_2-$ ;

10

$E^d - F^d$  is  $-C(R^{4d}) = C(R^{5d}) -$ ,  $-N = C(R^{4d}) -$ ,  $-C(R^{4d}) = N -$ , or  $-C(R^{4d})_2 C(R^{5d})_2 -$ ;

$J^d$ ,  $K^d$ ,  $L^d$  and  $M^d$  are independently selected from:

$C(R^{4d})-$ ,  $-C(R^{5d})-$  and  $-N-$ , provided that at least one of  $J^d$ ,  $K^d$ ,  $L^d$  and  $M^d$  is not  $-N-$ ;

5

$R^{2d}$  is selected from: H,  $C_1-C_6$  alkyl,  $(C_1-C_6$  alkyl)carbonyl,  $(C_1-C_6$  alkoxy)carbonyl,  $C_1-C_6$  alkylaminocarbonyl,  $C_3-C_6$  alkenyl,  $C_3-C_7$  cycloalkyl,  $C_4-C_{11}$  cycloalkylalkyl, aryl, heteroaryl( $C_1-C_6$  alkyl)carbonyl, heteroarylcarbonyl, aryl( $C_1-C_6$  alkyl)-,  $(C_1-C_6$  alkyl)carbonyl, arylcarbonyl, alkylsulfonyl, arylsulfonyl, aryl( $C_1-C_6$  alkyl)sulfonyl, heteroarylsulfonyl, heteroaryl( $C_1-C_6$  alkyl)sulfonyl, aryloxycarbonyl, and aryl( $C_1-C_6$  alkoxy)carbonyl, wherein said aryl groups are substituted with 0-2 substituents selected from the group consisting of  $C_1-C_4$  alkyl,  $C_1-C_4$  alkoxy, halo,  $CF_3$ , and nitro;

20  $R^{3d}$  is selected from: H,  $C_1-C_6$  alkyl,  $C_3-C_7$  cycloalkyl,  $C_4-C_{11}$  cycloalkylalkyl, aryl, aryl( $C_1-C_6$  alkyl)-, and heteroaryl( $C_1-C_6$  alkyl)-;

25  $R^{4d}$  and  $R^{5d}$  are independently selected from: H,  $C_1-C_4$  alkoxy,  $NR^{2d}R^{3d}$ , halogen,  $NO_2$ , CN,  $CF_3$ ,  $C_1-C_6$  alkyl,  $C_3-C_6$  alkenyl,  $C_3-C_7$  cycloalkyl,  $C_4-C_{11}$  cycloalkylalkyl, aryl, aryl( $C_1-C_6$  alkyl)-,  $C_2-C_7$  alkylcarbonyl, and arylcarbonyl;

30 alternatively, when substituents on adjacent atoms,  $R^{4d}$  and  $R^{5d}$  can be taken together with the carbon atoms to which they are attached to form a 5-7 membered carbocyclic or 5-7 membered heterocyclic aromatic or non-aromatic ring system, said carbocyclic or heterocyclic ring being optionally substituted with

0-2 groups selected from: C<sub>1</sub>-C<sub>4</sub> alkyl, C<sub>1</sub>-C<sub>4</sub> alkoxy, halo, cyano, amino, CF<sub>3</sub>, or NO<sub>2</sub>;

U<sup>d</sup> is selected from:

- (CH<sub>2</sub>)<sub>n</sub> - ,

5 - (CH<sub>2</sub>)<sub>n</sub> (CR<sup>7d</sup>=CR<sup>8d</sup>) (CH<sub>2</sub>)<sub>m</sub> - ,

- (CH<sub>2</sub>)<sub>t</sub> Q<sup>d</sup> (CH<sub>2</sub>)<sub>m</sub> - ,

- (CH<sub>2</sub>)<sub>n</sub> O (CH<sub>2</sub>)<sub>m</sub> - ,

- (CH<sub>2</sub>)<sub>n</sub> N(R<sup>6d</sup>) (CH<sub>2</sub>)<sub>m</sub> - ,

- (CH<sub>2</sub>)<sub>n</sub> C(=O) (CH<sub>2</sub>)<sub>m</sub> - , and

10 - (CH<sub>2</sub>)<sub>n</sub> S(O)<sub>p</sub> (CH<sub>2</sub>)<sub>m</sub> - ;

wherein one or more of the methylene groups in U<sup>d</sup> is optionally substituted with R<sup>7d</sup>;

15 Q<sup>d</sup> is selected from 1,2-phenylene, 1,3-phenylene, 2,3-pyridinylene, 3,4-pyridinylene, and 2,4-pyridinylene;

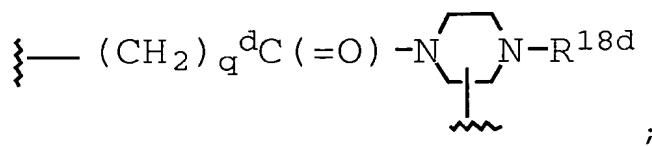
R<sup>6d</sup> is selected from: H, C<sub>1</sub>-C<sub>4</sub> alkyl, and benzyl;

20 R<sup>7d</sup> and R<sup>8d</sup> are independently selected from: H, C<sub>1</sub>-C<sub>6</sub> alkyl, C<sub>3</sub>-C<sub>7</sub> cycloalkyl, C<sub>4</sub>-C<sub>11</sub> cycloalkylalkyl, aryl, aryl(C<sub>1</sub>-C<sub>6</sub> alkyl)-, and heteroaryl(C<sub>0</sub>-C<sub>6</sub> alkyl)-;

25 W<sup>d</sup> is -C(=O)-N(R<sup>13d</sup>)-(C(R<sup>12d</sup>)<sub>2</sub>)<sub>q</sub> - ;

X<sup>d</sup> is -C(R<sup>12d</sup>)(R<sup>14d</sup>)-C(R<sup>12d</sup>)(R<sup>15d</sup>)- ;

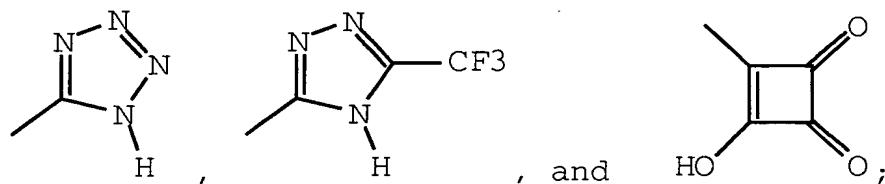
30 alternatively, W<sup>d</sup> and X<sup>d</sup> can be taken together to be



$\text{R}^{12\text{d}}$  is H or C<sub>1</sub>-C<sub>6</sub> alkyl;

5  $\text{Y}^{\text{d}}$  is selected from:

$-\text{COR}^{19\text{d}}$ ,  $-\text{SO}_3\text{H}$ ,



10

$\text{d}$  is selected from 1, 2, 3, 4, and 5;

$\text{d}'$  is 1-50;

15 W is independently selected at each occurrence from the group: O, NH, NHC(=O), C(=O)NH, NR<sup>8</sup>C(=O), C(=O)N R<sup>8</sup>, C(=O), C(=O)O, OC(=O), NHC(=S)NH, NHC(=O)NH, SO<sub>2</sub>, (OCH<sub>2</sub>CH<sub>2</sub>)<sub>s</sub>, (CH<sub>2</sub>CH<sub>2</sub>O)<sub>s'</sub>, (OCH<sub>2</sub>CH<sub>2</sub>CH<sub>2</sub>)<sub>s''</sub>, (CH<sub>2</sub>CH<sub>2</sub>CH<sub>2</sub>O)<sub>t</sub>, and (aa)<sub>t'</sub>;

20

aa is independently at each occurrence an amino acid;

Z is selected from the group: aryl substituted with 0-1 R<sup>10</sup>, C<sub>3-10</sub> cycloalkyl substituted with 0-1 R<sup>10</sup>, and a

25 5-10 membered heterocyclic ring system containing 1-4 heteroatoms independently selected from N, S, and O and substituted with 0-1 R<sup>10</sup>;

30 R<sup>6</sup>, R<sup>6a</sup>, R<sup>7</sup>, R<sup>7a</sup>, and R<sup>8</sup> are independently selected at each occurrence from the group: H, =O, COOH, SO<sub>3</sub>H, C<sub>1</sub>-C<sub>5</sub> alkyl substituted with 0-1 R<sup>10</sup>, aryl

substituted with 0-1 R<sup>10</sup>, benzyl substituted with 0-1 R<sup>10</sup>, and C<sub>1</sub>-C<sub>5</sub> alkoxy substituted with 0-1 R<sup>10</sup>, NHC(=O)R<sup>11</sup>, C(=O)NHR<sup>11</sup>, NHC(=O)NHR<sup>11</sup>, NHR<sup>11</sup>, R<sup>11</sup>, and a bond to C<sub>h</sub>;

5

k is 0 or 1;

s is selected from 0, 1, 2, 3, 4, and 5;

s' is selected from 0, 1, 2, 3, 4, and 5;

s" is selected from 0, 1, 2, 3, 4, and 5;

10 t is selected from 0, 1, 2, 3, 4, and 5;

A<sup>1</sup>, A<sup>2</sup>, A<sup>3</sup>, A<sup>4</sup>, A<sup>5</sup>, A<sup>6</sup>, A<sup>7</sup>, and A<sup>8</sup> are independently selected at each occurrence from the group: NR<sup>13</sup>, NR<sup>13</sup>R<sup>14</sup>, S, SH, S(Pg), OH, and a bond to L<sub>n</sub>;

15

E is a bond, CH, or a spacer group independently selected at each occurrence from the group: C<sub>1</sub>-C<sub>10</sub> alkyl substituted with 0-3 R<sup>17</sup>, aryl substituted with 0-3 R<sup>17</sup>, C<sub>3-10</sub> cycloalkyl substituted with 0-3 R<sup>17</sup>, and a 5-10 membered heterocyclic ring system containing 1-4 heteroatoms independently selected from N, S, and O and substituted with 0-3 R<sup>17</sup>;

25

R<sup>13</sup> and R<sup>14</sup> are each independently selected from the group: a bond to L<sub>n</sub>, hydrogen, C<sub>1</sub>-C<sub>10</sub> alkyl substituted with 0-3 R<sup>17</sup>, aryl substituted with 0-3 R<sup>17</sup>, a 5-10 membered heterocyclic ring system containing 1-4 heteroatoms independently selected from N, S, and O and substituted with 0-3 R<sup>17</sup>, and an electron, provided that when one of R<sup>13</sup> or R<sup>14</sup> is an electron, then the other is also an electron;

alternatively, R<sup>13</sup> and R<sup>14</sup> combine to form =C(R<sup>20</sup>)(R<sup>21</sup>);

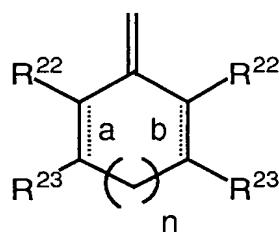
35 R<sup>17</sup> is independently selected at each occurrence from the group: a bond to L<sub>n</sub>, =O, F, Cl, Br, I, -CF<sub>3</sub>, -CN,

-CO<sub>2</sub>R<sup>18</sup>, -C(=O)R<sup>18</sup>, -C(=O)N(R<sup>18</sup>)<sub>2</sub>, -CH<sub>2</sub>OR<sup>18</sup>,  
 -OC(=O)R<sup>18</sup>, -OC(=O)OR<sup>18a</sup>, -OR<sup>18</sup>, -OC(=O)N(R<sup>18</sup>)<sub>2</sub>,  
 -NR<sup>19</sup>C(=O)R<sup>18</sup>, -NR<sup>19</sup>C(=O)OR<sup>18a</sup>, -NR<sup>19</sup>C(=O)N(R<sup>18</sup>)<sub>2</sub>,  
 -NR<sup>19</sup>SO<sub>2</sub>N(R<sup>18</sup>)<sub>2</sub>, -NR<sup>19</sup>SO<sub>2</sub>R<sup>18a</sup>, -SO<sub>3</sub>H, -SO<sub>2</sub>R<sup>18a</sup>,  
 5 -S(=O)R<sup>18a</sup>, -SO<sub>2</sub>N(R<sup>18</sup>)<sub>2</sub>, -N(R<sup>18</sup>)<sub>2</sub>, -NHC(=S)NHR<sup>18</sup>,  
 =NOR<sup>18</sup>, -C(=O)NHNR<sup>18</sup>R<sup>18a</sup>, -OCH<sub>2</sub>CO<sub>2</sub>H, and  
 2-(1-morpholino)ethoxy;

10 R<sup>18</sup>, R<sup>18a</sup>, and R<sup>19</sup> are independently selected at each occurrence from the group: a bond to L<sub>n</sub>, H, and C<sub>1</sub>-C<sub>6</sub> alkyl;

15 R<sup>20</sup> and R<sup>21</sup> are independently selected from the group: H, C<sub>1</sub>-C<sub>5</sub> alkyl, -CO<sub>2</sub>R<sup>25</sup>, C<sub>2</sub>-C<sub>5</sub> 1-alkene substituted with 0-3 R<sup>23</sup>, C<sub>2</sub>-C<sub>5</sub> 1-alkyne substituted with 0-3 R<sup>23</sup>, aryl substituted with 0-3 R<sup>23</sup>, and unsaturated 5-10 membered heterocyclic ring system containing 1-4 heteroatoms independently selected from N, S, and O and substituted with 0-3 R<sup>23</sup>;

20 alternatively, R<sup>20</sup> and R<sup>21</sup>, taken together with the divalent carbon radical to which they are attached form:



25 R<sup>22</sup> and R<sup>23</sup> are independently selected from the group: H, and R<sup>24</sup>;

30 alternatively, R<sup>22</sup>, R<sup>23</sup> taken together form a fused aromatic or a 5-10 membered heterocyclic ring system

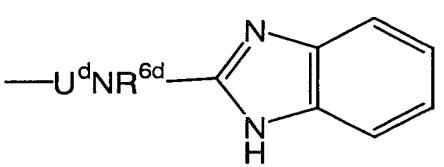
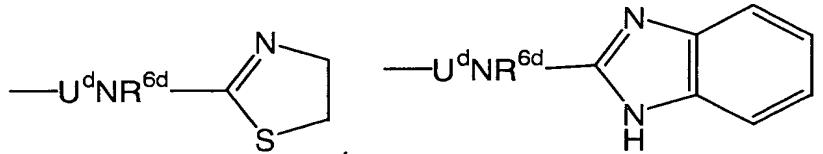
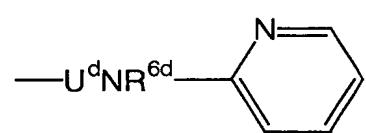
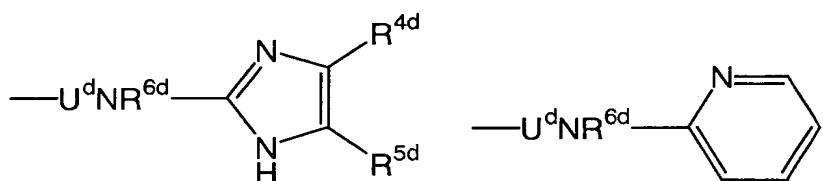
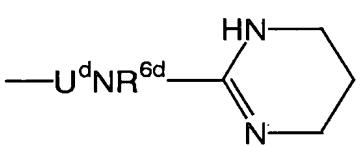
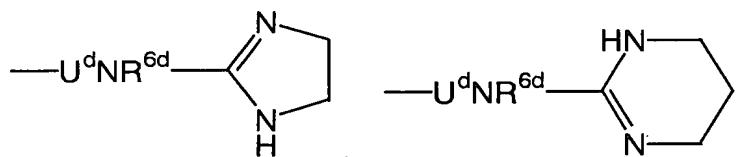
containing 1-4 heteroatoms independently selected from N, S, and O;

5         $R^{24}$  is independently selected at each occurrence from the group:  $-CO_2R^{25}$ ,  $-C(=O)N(R^{25})_2$ ,  $-CH_2OR^{25}$ ,  $-OC(=O)R^{25}$ ,  $-OR^{25}$ ,  $-SO_3H$ ,  $-N(R^{25})_2$ , and  $-OCH_2CO_2H$ ; and,

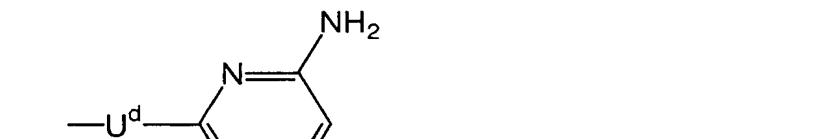
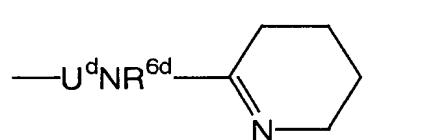
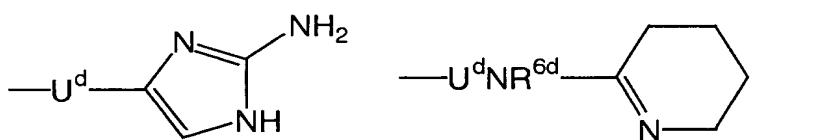
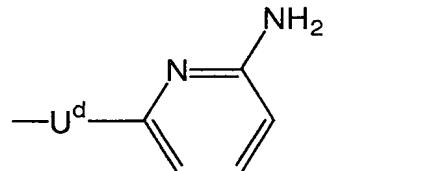
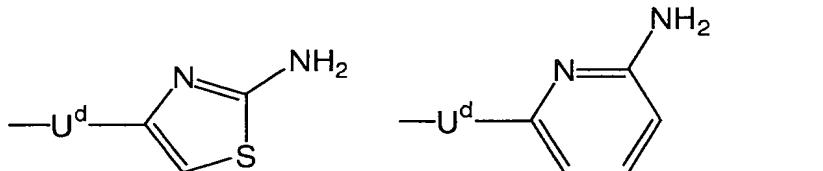
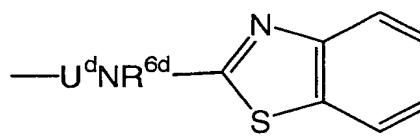
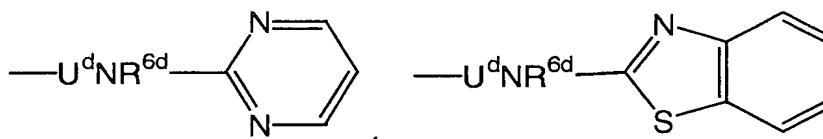
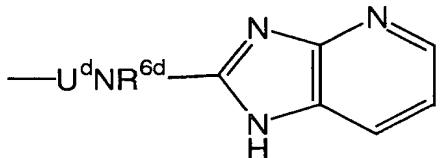
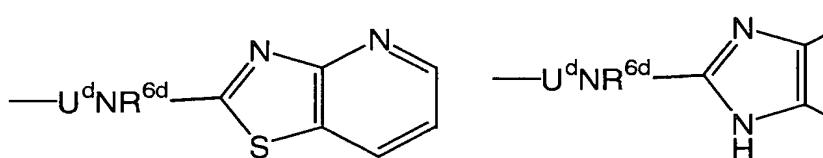
10         $R^{25}$  is independently selected at each occurrence from the group: H and C<sub>1</sub>-C<sub>3</sub> alkyl.

4.        A compound according to Claim 3, wherein:

$R^{1de}$  is selected from:



5



10

or



wherein the above heterocycles are optionally substituted with 0-2 substituents selected from the group:  $\text{NH}_2$ ,

halogen,  $\text{NO}_2$ ,  $\text{CN}$ ,  $\text{CF}_3$ ,  $\text{C}_1\text{-C}_4$  alkoxy,  $\text{C}_1\text{-C}_6$  alkyl, and  $\text{C}_3\text{-C}_7$  cycloalkyl;

$U^d$  is  $-(\text{CH}_2)_n-$ ,  $-(\text{CH}_2)_t^d Q^d (\text{CH}_2)_m^d-$  or  $-\text{C}(=\text{O})(\text{CH}_2)_n^d-1-$ ,

5 wherein one of the methylene groups is optionally substituted with  $R^{7d}$ ;

$R^{7d}$  is selected from:  $\text{C}_1\text{-C}_6$  alkyl,  $\text{C}_3\text{-C}_7$  cycloalkyl,  $\text{C}_4\text{-C}_{11}$  cycloalkylalkyl, aryl, aryl( $\text{C}_1\text{-C}_6$  alkyl), 10 heteroaryl, and heteroaryl( $\text{C}_1\text{-C}_6$  alkyl);

$R^{10d}$  is selected from: H,  $R^{1de}$ ,  $\text{C}_1\text{-C}_4$  alkoxy substituted with 0-1  $R^{21d}$ , halogen,  $\text{CO}_2R^{17d}$ ,  $\text{CONR}^{17d}R^{20d}$ ,  $\text{C}_1\text{-C}_6$  alkyl substituted with 0-1  $R^{15d}$  or 0-1  $R^{21d}$ ,  $\text{C}_3\text{-C}_7$  cycloalkyl substituted with 0-1  $R^{15d}$  or 0-1  $R^{21d}$ , 15  $\text{C}_4\text{-C}_{11}$  cycloalkylalkyl substituted with 0-1  $R^{15d}$  or 0-1  $R^{21d}$ , and aryl( $\text{C}_1\text{-C}_6$  alkyl)- substituted with 0-1  $R^{15d}$  or 0-2  $R^{11d}$  or 0-1  $R^{21d}$ ;

20  $R^{10de}$  is selected from: H,  $\text{C}_1\text{-C}_4$  alkoxy substituted with 0-1  $R^{21d}$ , halogen,  $\text{CO}_2R^{17d}$ ,  $\text{CONR}^{17d}R^{20d}$ ,  $\text{C}_1\text{-C}_6$  alkyl substituted with 0-1  $R^{15d}$  or 0-1  $R^{21d}$ ,  $\text{C}_3\text{-C}_7$  cycloalkyl substituted with 0-1  $R^{15d}$  or 0-1  $R^{21d}$ , 25  $\text{C}_4\text{-C}_{11}$  cycloalkylalkyl substituted with 0-1  $R^{15d}$  or 0-1  $R^{21d}$ , and aryl( $\text{C}_1\text{-C}_6$  alkyl)- substituted with 0-1  $R^{15d}$  or 0-2  $R^{11d}$  or 0-1  $R^{21d}$ ;

$W^d$  is  $-\text{C}(=\text{O})-\text{N}(R^{13d})-$ ;

30  $X^d$  is  $-\text{CH}(R^{14d})-\text{CH}(R^{15d})-$ ;

$R^{13d}$  is H or  $\text{CH}_3$ ;

R<sup>14d</sup> is selected from:

5        H, C<sub>1</sub>-C<sub>10</sub> alkyl, aryl, or heteroaryl, wherein said aryl or heteroaryl groups are optionally substituted with 0-3 substituents selected from the group consisting of: C<sub>1</sub>-C<sub>4</sub> alkyl, C<sub>1</sub>-C<sub>4</sub> alkoxy, aryl, halo, cyano, amino, CF<sub>3</sub>, and NO<sub>2</sub>;

R<sup>15d</sup> is H or R<sup>16d</sup>;

10      Y<sup>d</sup> is -COR<sup>19d</sup>;

R<sup>19d</sup> is selected from:

hydroxy, C<sub>1</sub>-C<sub>10</sub> alkoxy,

methylcarbonyloxymethoxy-,

15      ethylcarbonyloxymethoxy-,

t-butylcarbonyloxymethoxy-,

cyclohexylcarbonyloxymethoxy-,

1-(methylcarbonyloxy)ethoxy-,

1-(ethylcarbonyloxy)ethoxy-,

20      1-(t-butylcarbonyloxy)ethoxy-,

1-(cyclohexylcarbonyloxy)ethoxy-,

i-propyloxycarbonyloxymethoxy-,

t-butyloxycarbonyloxymethoxy-,

1-(i-propyloxycarbonyloxy)ethoxy-,

25      1-(cyclohexyloxycarbonyloxy)ethoxy-,

1-(t-butyloxycarbonyloxy)ethoxy-,

dimethylaminoethoxy-,

diethylaminoethoxy-,

(5-methyl-1,3-dioxacyclopenten-2-on-4-yl)methoxy-,

30      (5-(t-butyl)-1,3-dioxacyclopenten-2-on-4-yl)methoxy-,

(1,3-dioxa-5-phenyl-cyclopenten-2-on-4-yl)methoxy-, and

1-(2-(2-methoxypropyl)carbonyloxy)ethoxy-;

R<sup>20d</sup> is H or CH<sub>3</sub>;

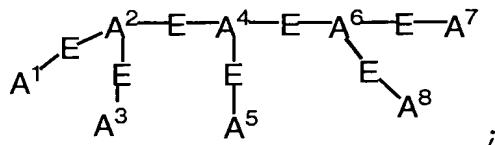
35

m<sup>d</sup> is 0 or 1;

$n^d$  is 1-4;

$t^d$  is 0 or 1;

5  $C_h$  is



$A^1$  is selected from the group: OH, and a bond to  $L_n$ ;

10

$A^2$ ,  $A^4$ , and  $A^6$  are each N;

$A^3$ ,  $A^5$ , and  $A^8$  are each OH;

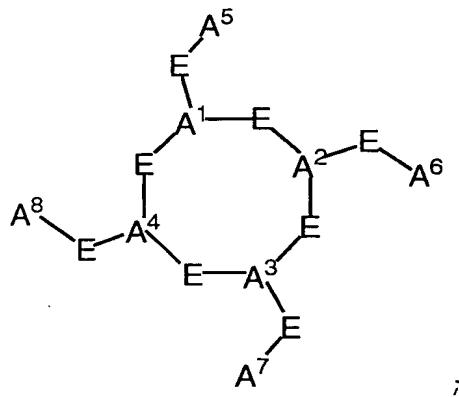
15  $A^7$  is a bond to  $L_n$  or NH-bond to  $L_n$ ;

E is a  $C_2$  alkyl substituted with 0-1  $R^{17}$ ;

$R^{17}$  is =O;

20

alternatively,  $C_h$  is



25

$A^1$  is selected from the group: OH and a bond to  $L_n$ ;

A<sup>2</sup>, A<sup>3</sup> and A<sup>4</sup> are each N;

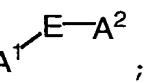
A<sup>5</sup>, A<sup>6</sup> and A<sup>8</sup> are each OH;

5

A<sup>7</sup> is a bond to L<sub>n</sub>;

E is a C<sub>2</sub> alkyl substituted with 0-1 R<sup>17</sup>;

10 R<sup>17</sup> is =O;

alternatively, C<sub>h</sub> is A<sup>1</sup>  ;

A<sup>1</sup> is NH<sub>2</sub> or N=C(R<sup>20</sup>)(R<sup>21</sup>);

15 E is a bond;

A<sup>2</sup> is NHR<sup>13</sup>;

R<sup>13</sup> is a heterocycle substituted with R<sup>17</sup>, the heterocycle  
20 being selected from pyridine and pyrimidine;

R<sup>17</sup> is selected from a bond to L<sub>n</sub>, C(=O)NHR<sup>18</sup> and  
C(=O)R<sup>18</sup>;

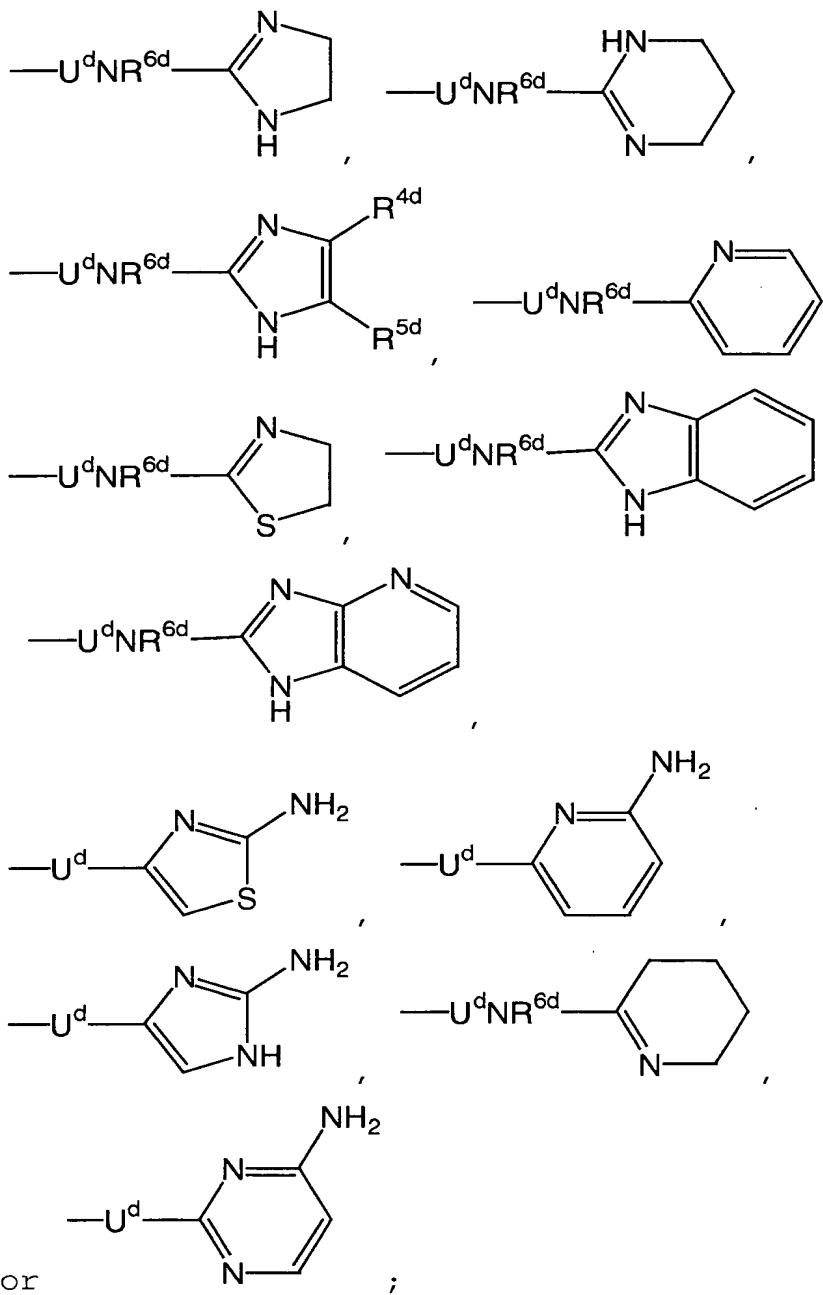
25 R<sup>18</sup> is a bond to L<sub>n</sub>;

R<sup>24</sup> is selected from the group: -CO<sub>2</sub>R<sup>25</sup>, -OR<sup>25</sup>, -SO<sub>3</sub>H, and  
-N(R<sup>25</sup>)<sub>2</sub>; and,

30 R<sup>25</sup> is independently selected at each occurrence from the  
group: hydrogen and methyl.

5. A compound according to Claim 4, wherein:

$R^{1de}$  is selected from:



wherein the above heterocycles are optionally substituted with 0-2 substituents selected from the group:  $NH_2$ , halogen,  $NO_2$ ,  $CN$ ,  $CF_3$ ,  $C_1-C_4$  alkoxy,  $C_1-C_6$  alkyl, and  $C_3-C_7$  cycloalkyl.

15

6. A compound according to Claim 2, wherein the compound is selected from the group:

2-(((4-((3-(2-(3-((6-((1-aza-2-(2-sulfophenyl)vinyl)amino)(3-pyridyl)carbonylamino)propoxy)-ethoxy)ethoxy)propyl)amino)sulfonyl)-phenyl)phenyl)sulfonyl)amino)-3-((1-(3-(imidazole-2-ylamino)propyl)(1H-indazol-5-yl))carbonylamino)propanoic acid;

2-(2-aza-2-((5-(N-(1,3-bis(3-(2-(3-((4-((1-carboxy-2-((1-(3-(imidazol-2-ylamino)propyl)(1H-indazol-5-yl))carbonylamino)ethyl)amino)sulfonyl)-phenyl)phenyl)sulfonyl)amino)propoxy)-ethoxy)ethoxy)propyl)carbamoyl)propyl)carbamoyl)(2-pyridyl)amino)vinyl)benzenesulfonic acid;

2-((6-((1-aza-2-(sulfophenyl)vinyl)amino)(3-pyridyl)carbonylamino)-4-(N-(3-(2-(3-((4-(4-((1-carboxy-2-((1-(3-(imidazol-2-ylamino)propyl)(1H-indazol-5-yl))carbonylamino)-ethyl)amino)sulfonyl)phenyl)phenyl)sulfonyl)-amino)propoxy)-ethoxy)ethoxy)propyl)carbamoyl)butanoic acid;

3-((1-(3-(imidazole-2-ylamino)propyl)(1H-indazol-5-yl))carbonylamino)-2-((4-(4-((3-(2-(2-(3-(2-(1,4,7,10-tetraaza-4,7,10-tris(carboxymethyl)-cyclododecyl)-acetyl)amino)propoxy)ethoxy)ethoxy)propyl)amino)sulfonyl)phenyl)phenyl)sulfonyl)amino)propanoic acid;

2-(6-((6-((1-aza-2-(2-sulfophenyl)vinyl)-amino)(3-pyridyl)carbonylamino)hexanoylamino)-3-((1-(3-(imidazol-2-ylamino)propyl)(1H-indazol-5-yl))carbonylamino)-propanoic acid;

2-((6-((1-aza-2-(2-sulfophenyl)vinyl)-amino)(3-pyridyl)carbonylamino)-3-((1-(3-(imidazol-2-ylamino)propyl)(1H-indazol-5-yl))carbonylamino)propanoic acid;

5

[2-[[[5-[carbonyl]-2-pyridinyl]hydrazone]methyl]-benzenesulfonic acid]-Glu(2-(6-aminohexanoylamino)-3-((1-(3-(imidazol-2-ylamino)propyl)(1H-indazol-5-yl))carbonyl-amino)propanoic acid)(2-(6-aminohexanoylamino)-3-((1-(3-(imidazol-2-ylamino)propyl)(1H-indazol-5-yl))carbonyl-amino)propanoic acid);

10

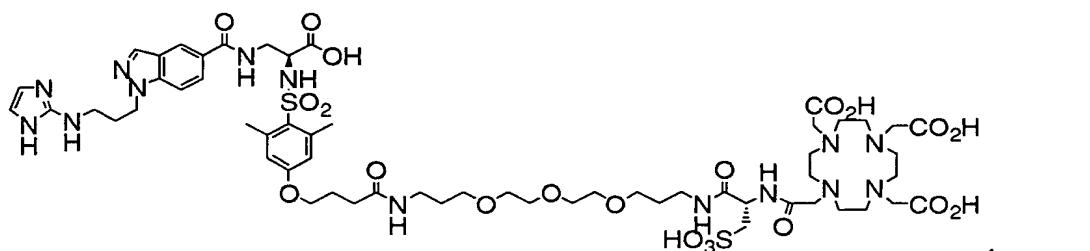
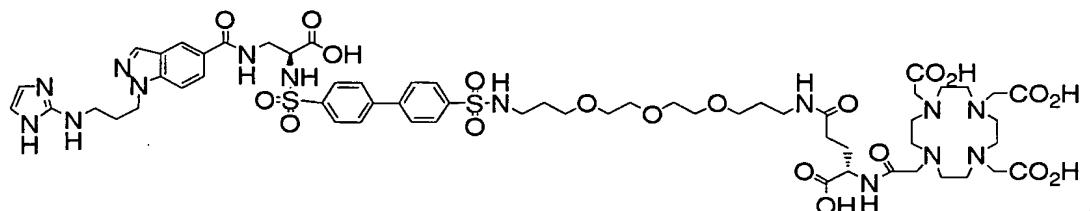
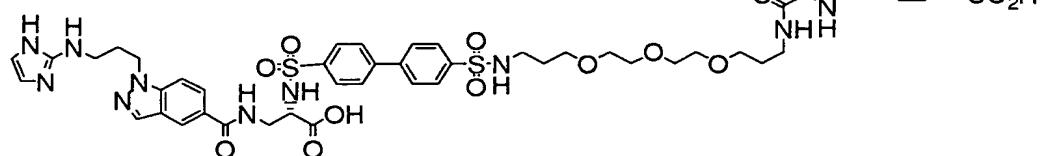
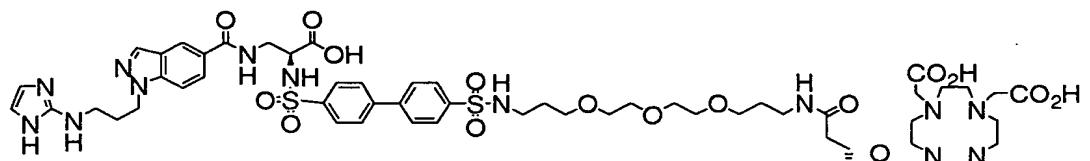
[2-[[[5-[carbonyl]-2-pyridinyl]hydrazone]methyl]-benzenesulfonic acid]-Glu-bis-[Glu(2-(6-Aminohexanoylamino)-3-((1-(3-(imidazol-2-ylamino)propyl)(1H-indazol-5-yl))carbonyl-amino)propanoic acid)(2-(6-aminohexanoylamino)-3-((1-(3-(imidazol-2-ylamino)propyl)(1H-indazol-5-yl))carbonyl-amino)propanoic acid)];

20

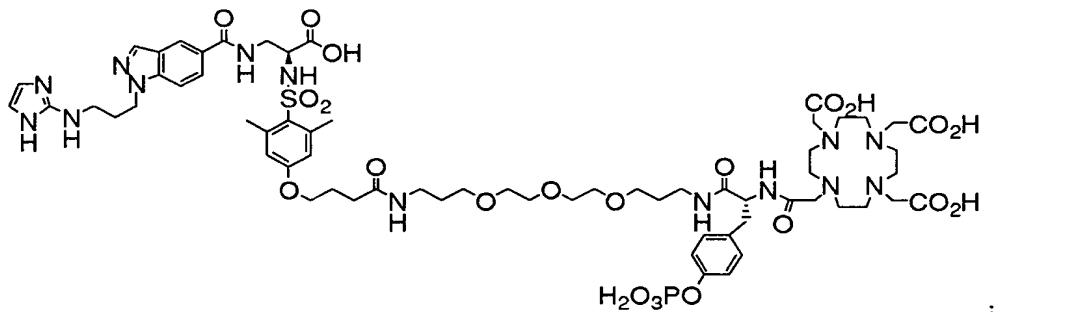
2-(1,4,7,10-tetraaza-4,7,10-tris(carboxymethyl)-1-cyclododecyl)acetyl-{2-(6-aminohexanoylamino)-3-((1-(3-(imidazol-2-ylamino)propyl)(1H-indazol-5-yl))carbonyl-amino)propanoic acid};

25

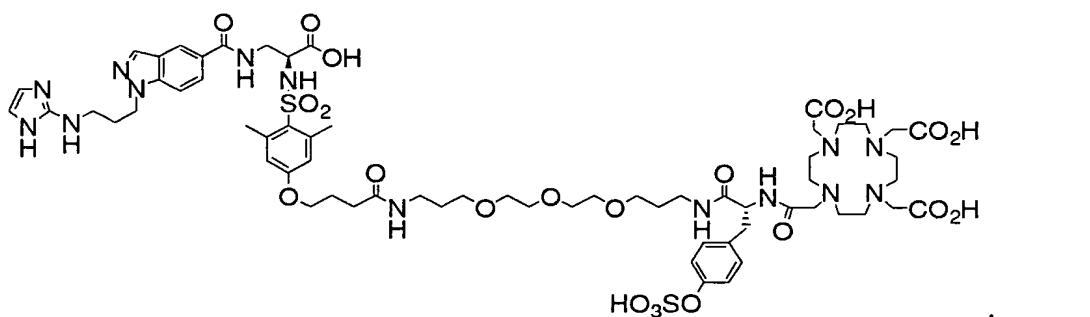
2-(1,4,7,10-tetraaza-4,7,10-tris(carboxymethyl)-1-cyclododecyl)acetyl-Glu{2-(6-Aminohexanoylamino)-3-((1-(3-(imidazol-2-ylamino)propyl)(1H-indazol-5-yl))carbonyl-amino)propanoic acid}{2-(6-Aminohexanoylamino)-3-((1-(3-(imidazol-2-ylamino)propyl)(1H-indazol-5-yl))carbonyl-amino)propanoic acid};



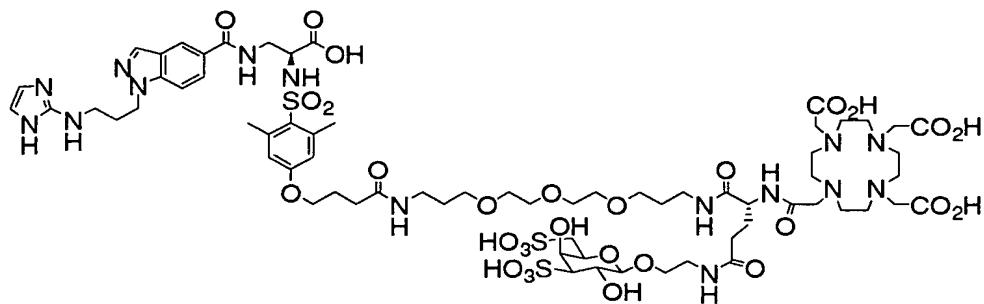
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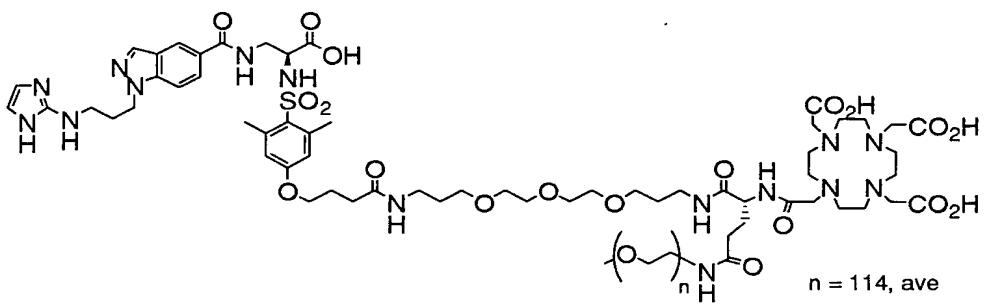
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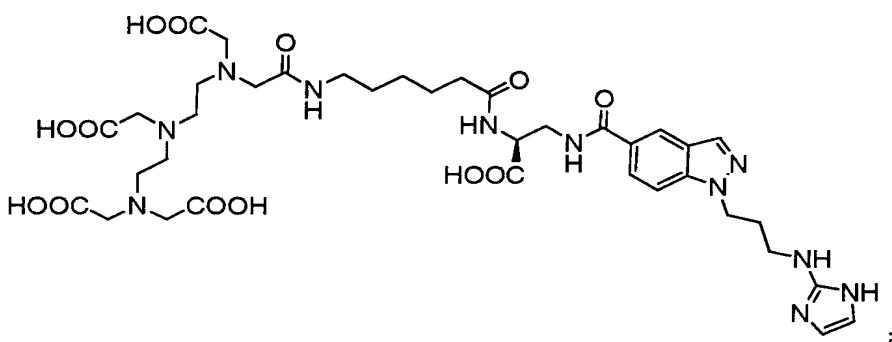
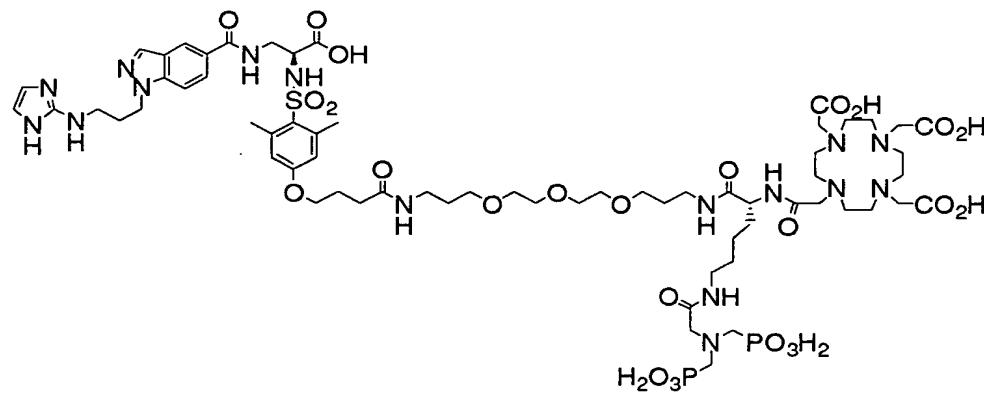


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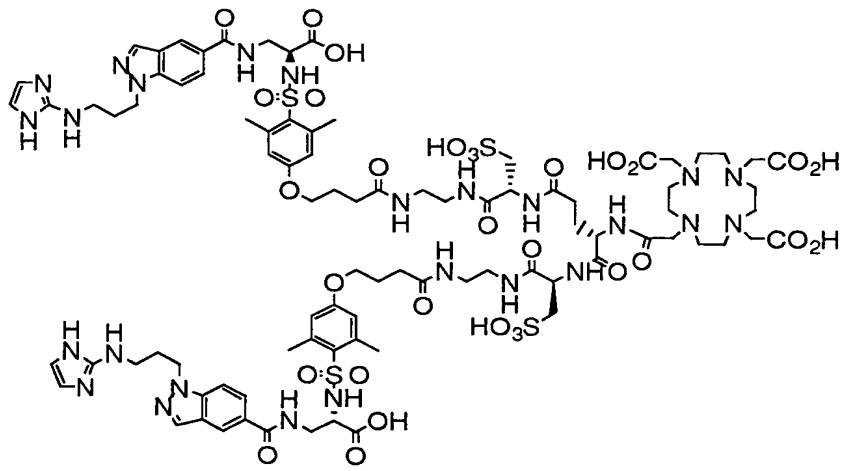


2-((4-(3-(2-(3-(2-(1,4,7,10-tetraaza-4,7,10-  
10 tris(carboxymethyl)cyclododecylacetylaminohexanoylamino)propoxy)ethoxy)ethoxy)propyl)-  
carbamoylpropoxy)-2,6-dimethylphenyl)-  
sulfonyl)amino)-3-((1-(3-(imidazol-2-  
ylamino)propyl)(1H-indazol-5-yl)carbonylamino)-  
propionic acid salt;

15



5 2-({[4-({3-[2-((2R)-3-Sulfo-2-{2-[1,4,7,10-tetraaza-  
4,7,10-tris(carboxymethyl)cyclododecyl]acetyl}amino)-  
propyl}ethyl}carbamoyl}propoxy)-2,6-dimethylphenyl]-  
sulfonyl}amino) (2S)-3-({1-[3-(imidazol-2-  
ylamino)propyl] (1H-indazol-5-  
yl)}carbonyl)propanoic Acid;



15 2-[(4-([4-([2-((2R)-3-Sulfo-2-{2-[1,4,7,10-tetraaza-  
4,7,10-tris(carboxymethyl)cyclododecyl]-

acetylamino}propyl)ethyl]amino}sulfonyl)phenyl]phenyl}sulfonyl)amino] (2S)-3-({1-[3-(imidazol-2-ylamino)propyl] (1H-indazol-5-yl)}carbonylamino)propanoic Acid;

5 (4S)-4-(N-{1-[N-(2-{4-({[(1S)-1-carboxy-2-({1-[3-(2-pyridylamino)propyl] (1H-indazol-5-yl)}carbonylamino)ethyl]amino}sulfonyl)-3,5-dimethylphenoxy]butanoylamino}ethyl)carbamoyl]-3-carboxypropyl}carbamoyl)-4-{2-[1,4,7,10-tetraaza-4,7,10-tris(carboxymethyl)cyclododecyl]acetylamino}butanoic acid;

10 (4S)-4-(N-{1-[N-(2-{4-({[(1S)-1-carboxy-2-({1-[3-(imidazol-2-ylamino)propyl] (1H-indazol-5-yl)}carbonylamino)ethyl]amino}sulfonyl)-3,5-dimethylphenoxy]butanoylamino}ethyl)carbamoyl]-3-carboxypropyl}carbamoyl)-4-{2-[1,4,7,10-tetraaza-4,7,10-tris(carboxymethyl)cyclododecyl]acetylamino}butanoic acid;

15 (4S)-4-(N-{1-[N-(2-{4-({[(1S)-1-carboxy-2-({1-[3-(imidazol-2-ylamino)propyl] (1H-indazol-5-yl)}carbonylamino)ethyl]amino}sulfonyl)-3,5-dimethylphenoxy]butanoylamino}ethyl)carbamoyl]-3-carboxypropyl}carbamoyl)-4-{2-[1,4,7,10-tetraaza-4,7,10-tris(carboxymethyl)cyclododecyl]acetylamino}butanoic acid;

20 (4S)-4-{N-[(1S)-1-(N-{1,3-bis[N-(2-{4-({[(1S)-1-carboxy-2-({1-[3-(imidazol-2-ylamino)propyl] (1H-indazol-5-yl)}carbonylamino)ethyl]amino}sulfonyl)-3,5-dimethylphenoxy]butanoylamino}ethyl)carbamoyl]propyl}carbamoyl)-3-carboxypropyl}carbamoyl)-4-(6-{2-[1,4,7,10-tetraaza-4,7,10-tris(carboxymethyl)cyclododecyl]acetylamino}hexanoylamino)butanoic acid;

25 (4S)-4-(N-{1-[N-(2-{4-({[(1S)-1-carboxy-2-({1-[3-(3,4,5,6-tetrahydropyrimidin-2-ylamino)propyl] (1H-indazol-5-yl)}carbonylamino)ethyl]amino}sulfonyl)-3,5-dimethylphenoxy]butanoylamino}ethyl)carbamoyl]-3-carboxypropyl}carbamoyl)-4-{2-[1,4,7,10-tetraaza-4,7,10-tris

(carboxymethyl)cyclododecyl]acetyl amino}butanoic acid;

5 (4S)-4-(N-{1-[N-(2-{4-[4-((1S)-1-carboxy-2-({1-methyl-3-[3-(2-3,4,5,6-tetrahydropyridylamino)propyl] (1H-indazol-6-yl)}carbonylamino)ethyl]amino}sulfonyl)-3,5-dimethylphenoxy]butanoylamino}ethyl)carbamoyl]-3-carboxypropyl}carbamoyl)-4-{2-[1,4,7,10-tetraaza-4,7,10-

10 tris(carboxymethyl)cyclododecyl]acetyl amino}butanoic acid;

15 (4S)-4-(N-{(1S)-1-[N-(2-{4-[4-((1S)-1-carboxy-2-({1-[2-(2-3,4,5,6-tetrahydropyridylamino)ethyl] (1H-indazol-5-yl)}carbonylamino)ethyl]amino}sulfonyl)-3,5-dimethylphenoxy]butanoylamino}ethyl)carbamoyl]-3-carboxy propyl}carbamoyl)-4-{2-[1,4,7,10-tetraaza-4,7,10-tris

20 (carboxymethyl)cyclododecyl]acetyl amino}butanoic acid;

25 (2S)-2-{{(2,6-dimethyl-4-{3-[N-(2-{2-[1,4,7,10-tetraaza-4,7,10-tris(carboxymethyl)cyclododecyl]acetyl-amino}ethyl)carbamoyl]propoxy}phenyl)sulfonyl}amino}-3-({2-[2-(2-3,4,5,6-tetrahydropyridylamino)ethyl](2-hydro-1H-indazol-5-yl)}carbonylamino)propanoic acid;

30 (4S)-4-{N-[(1S)-1-(N-{2-[({4-[4-((1S)-1-carboxy-2-({1-[2-(2-3,4,5,6-tetrahydropyridylamino)ethyl] (1H-indazol-5-yl)}carbonylamino)ethyl]amino}sulfonyl)phenyl]phenyl)sulfonyl}amino}ethyl}carbamoyl)-3-carboxypropyl} carbamoyl)-4-{2-[1,4,7,10-tetraaza-4,7,10-tris(carboxy-

35 methyl)cyclododecyl]acetyl amino}butanoic acid;

(4S)-4-{N-[(1S)-1-(N-{2-[({4-[4-((1S)-1-carboxy-2-({1-[3-(3,4,5,6-tetrahydropyrimidin-2-ylamino)

propyl] (1H-indazol-5-yl) carbonylamino) ethyl] amino} sulfonyl) phenyl] phenyl} sulfonyl) amino] ethyl} carbamoyl) -3-carboxy propyl] carbamoyl} -4- {2- {1,4,7,10-tetraaza-4,7,10-tris (carboxymethyl) cyclododecyl] acetylamino} butanoic acid;

5 (2S)-3- ({3- [(imidazol-2-ylamino) methyl] -1-methyl (1H-indazol-6-yl) carbonylamino) -2- ({4- (4- {[(2- {2- [1,4,7,10-tetraaza-4,7,10-tris (carboxymethyl) cyclododecyl] acetylamino} ethyl) amino} sulfonyl} phenyl) phenyl} sulfonyl) amino} propanoic acid;

10 15 3- [(7- {3- [(6- {[(1E)-1-aza-2- (2-sulfophenyl) vinyl] amino} (3-pyridyl) carbonylamino] propoxy} -1- [3- (imidazol-2-ylamino) propyl] (1H-indazol-5-yl)) -carbonylamino] (2S)-2- {[(2,4,6-trimethylphenyl) sulfonyl] -amino} propanoic acid;

20 and

25 3- {[1- [3- (imidazol-2-ylamino) propyl] -7- (3- {2- [1,4,7,10-tetraaza-4,7,10-tris (carboxymethyl) cyclododecyl] -acetylamino} propoxy) (1H-indazol-5-yl)] carbonylamino} -2- {[(2,4,6-trimethylphenyl) sulfonyl] amino} propanoic acid;

30 or a pharmaceutically acceptable salt form thereof.

7. A kit comprising a compound of Claim 2, or a pharmaceutically acceptable salt form thereof and a pharmaceutically acceptable carrier.

35 8. A kit according to Claim 7, wherein the kit further comprises one or more ancillary ligands and a reducing agent.

9. A kit according to Claim 8, wherein the ancillary ligands are tricine and TPPTS.
10. A kit according to Claim 8, wherein the reducing agent is tin(II).  
5
11. A diagnostic or therapeutic metallopharmaceutical composition, comprising: a metal, a chelator capable of chelating the metal and a targeting moiety, wherein the targeting moiety is bound to the chelator, is an indazole nonpeptide and binds to a receptor that is upregulated during angiogenesis and the compound has 0-1 linking groups between the targeting moiety and chelator.  
10
12. A composition according to Claim 11, wherein the metallopharmaceutical is a diagnostic radiopharmaceutical, the metal is a radioisotope selected from the group:  $^{99m}\text{Tc}$ ,  $^{95}\text{Tc}$ ,  $^{111}\text{In}$ ,  $^{62}\text{Cu}$ ,  $^{64}\text{Cu}$ ,  $^{67}\text{Ga}$ , and  $^{68}\text{Ga}$ , and the linking group is present between the targeting moiety and chelator.  
20
13. A composition according to Claim 12, wherein the targeting moiety is an indazole and the receptor is  $\alpha_v\beta_3$  or  $\alpha_v\beta_5$ .  
25
14. A composition according to Claim 13, wherein the radioisotope is  $^{99m}\text{Tc}$  or  $^{95}\text{Tc}$ , the radiopharmaceutical further comprises a first ancillary ligand and a second ancillary ligand capable of stabilizing the radiopharmaceutical.  
30
15. A composition according to Claim 14, wherein the radioisotope is  $^{99m}\text{Tc}$ .  
35
16. A composition according to Claim 15, wherein the radiopharmaceutical is selected from the group:

99mTc (((((4-(4-(((3-(2-(3-((6-(diazenido)(3-  
5 pyridyl)carbonylamino)propoxy)-  
ethoxy)ethoxy)propyl)amino)sulfonyl)-  
phenyl)phenyl)sulfonyl)amino)-3-((1-(3-(imidazole-2-  
ylamino)propyl)(1H-indazol-5-  
yl)carbonylamino)propanoic acid) (tricine) (TPPTS);

99mTc (2-(2-((5-(1,3-bis(3-(2-(3-((4-(4-(((1-  
10 carboxy-2-((1-(3-(imidazol-2-ylamino)propyl)(1H-  
indazol-5-yl)carbonylamino)ethyl)amino)sulfonyl)-  
phenyl)phenyl)sulfonyl)amino)propoxy)-  
ethoxy)ethoxy)propyl)carbamoyl)propyl)carbamoyl)(2-  
pyridyl)2-diazenido) (tricine) (TPPTS);

15 99mTc (2-((6-(diazenido)(3-pyridyl)carbonylamino)-4-(N-  
(3-(2-(2-(3-((4-(4-(((1-carboxy-2-((1-(3-(imidazol-  
2-ylamino)propyl)(1H-indazol-5-yl)carbonylamino)-  
ethyl)amino)sulfonyl)phenyl)phenyl)sulfonyl)-  
amino)propoxy)-  
20 ethoxy)ethoxy)propyl)carbamoyl)butanoic acid)  
(tricine) (TPPTS);

99mTc (2-((6-(diazenido)(3-  
pyridyl)carbonylamino)hexanoylamino)-3-((1-(3-  
25 (imidazol-2-ylamino)propyl)(1H-indazol-5-  
yl)carbonylamino)-propanoic acid) (tricine) (TPPTS);

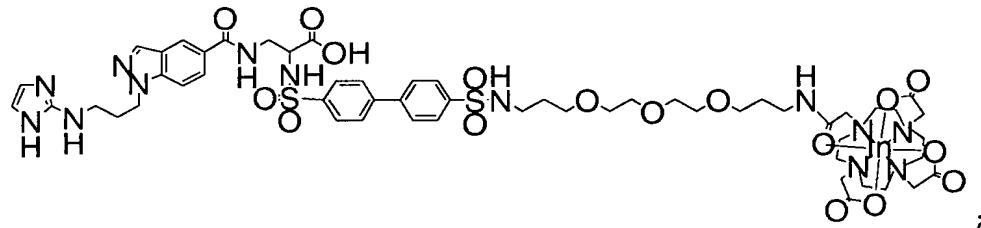
30 99mTc (2-((6-(diazenido)(3-pyridyl)carbonylamino)-3-((1-  
(3-(imidazol-2-ylamino)propyl)(1H-indazol-5-  
yl)carbonylamino)propanoic acid (tricine) (TPPTS);

99mTc [2-[[5-[carbonyl]-2-pyridinyl]diazenido]-Glu(2-(6-  
aminohexanoylamino)-3-((1-(3-(imidazol-2-  
ylamino)propyl)(1H-indazol-5-yl)carbonyl-  
35 amino)propanoic acid)(2-(6-aminohexanoylamino)-3-  
((1-(3-(imidazol-2-ylamino)propyl)(1H-indazol-5-  
yl)carbonyl-amino)propanoic acid))  
(tricine) (TPPTS);

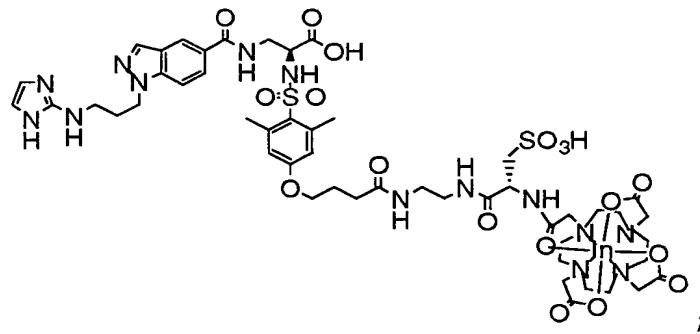
$^{99m}\text{Tc}$  ([2-[[5-[carbonyl]-2-pyridinyl]diazenido]-Glu-bis-  
 [Glu(2-(6-aminohexanoylamino)-3-((1-(3-(imidazol-2-  
 ylamino)propyl)(1H-indazol-5-yl)carbonyl-  
 amino)propanoic acid)(2-(6-aminohexanoylamino)-3-  
 ((1-(3-(imidazol-2-ylamino)propyl)(1H-indazol-5-  
 yl)carbonyl-amino)propanoic acid)])  
 (tricine) (TPPTS);  
 5

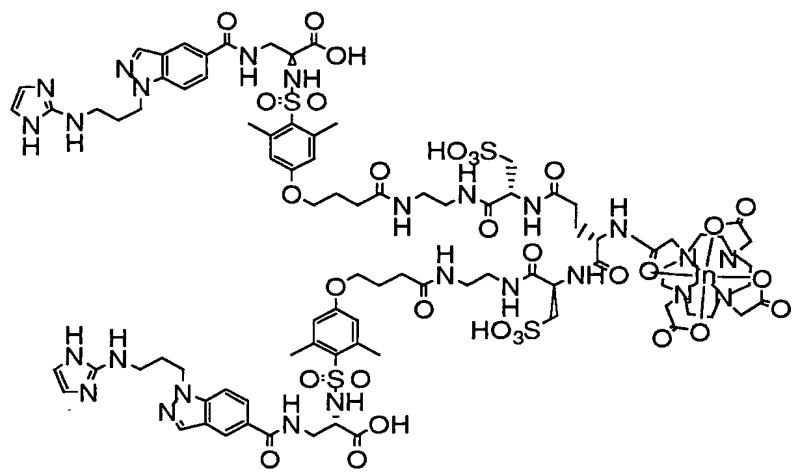
17. A composition according to Claim 13, wherein the  
 10 radioisotope is  $^{111}\text{In}$ .

18. A composition according to Claim 17, wherein, the  
 radiopharmaceutical is selected from the group:

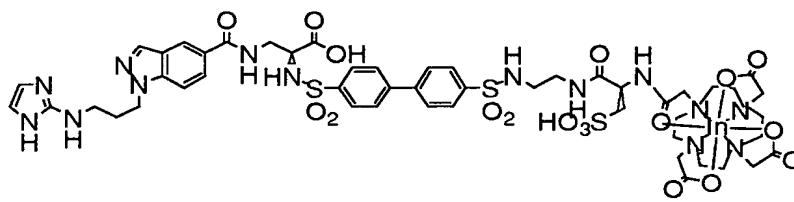


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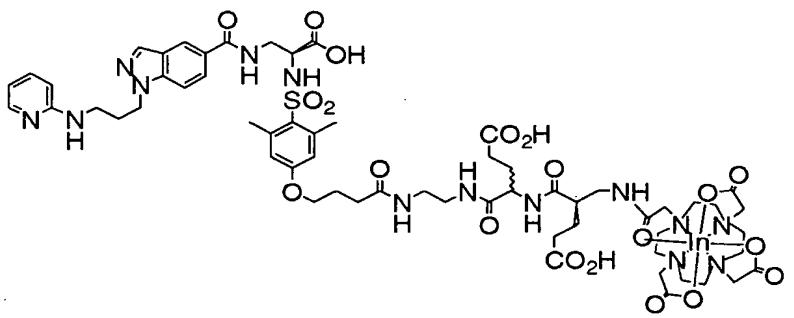




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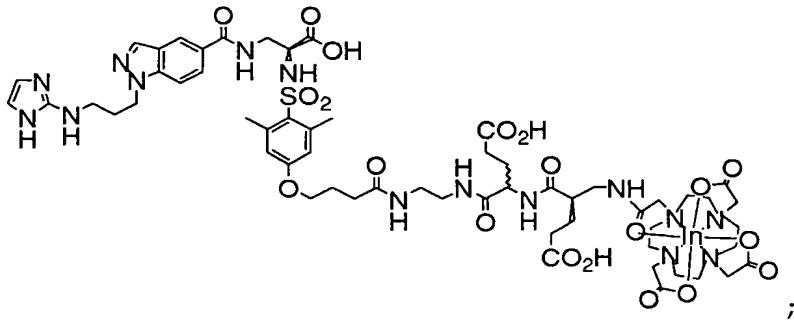


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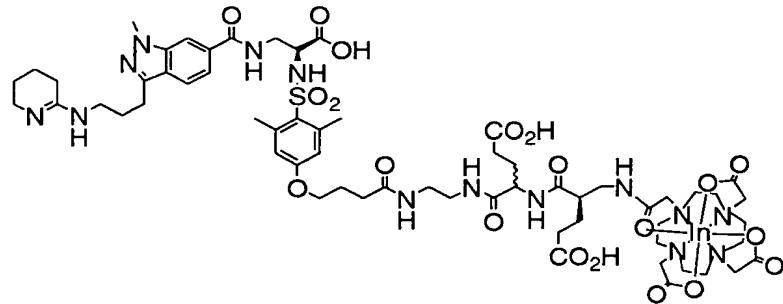
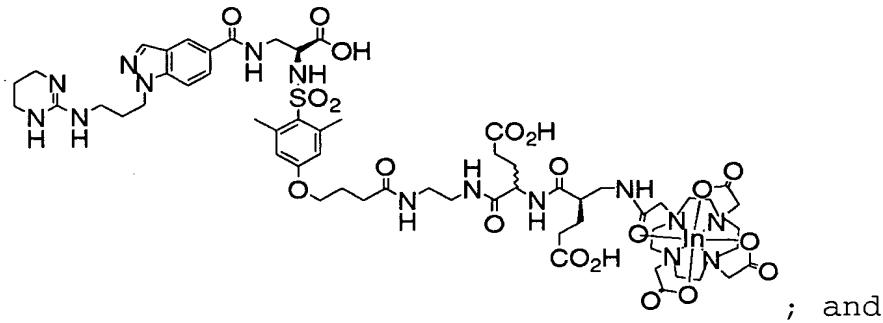


5

;



;



5

19. A composition according to Claim 11, wherein the metallopharmaceutical is a therapeutic radiopharmaceutical, the metal is a radioisotope selected from the group:  $^{186}\text{Re}$ ,  $^{188}\text{Re}$ ,  $^{153}\text{Sm}$ ,  $^{166}\text{Ho}$ ,  $^{177}\text{Lu}$ ,  $^{149}\text{Pm}$ ,

10  $^{90}\text{Y}$ ,  $^{212}\text{Bi}$ ,  $^{103}\text{Pd}$ ,  $^{109}\text{Pd}$ ,  $^{159}\text{Gd}$ ,  $^{140}\text{La}$ ,  $^{198}\text{Au}$ ,  $^{199}\text{Au}$ ,  $^{169}\text{Yb}$ ,  $^{175}\text{Yb}$ ,  $^{165}\text{Dy}$ ,  $^{166}\text{Dy}$ ,  $^{67}\text{Cu}$ ,  $^{105}\text{Rh}$ ,  $^{111}\text{Ag}$ , and  $^{192}\text{Ir}$ , the targeting moiety is an indazole nonpeptide and the linking group is present between the targeting moiety and chelator.

15

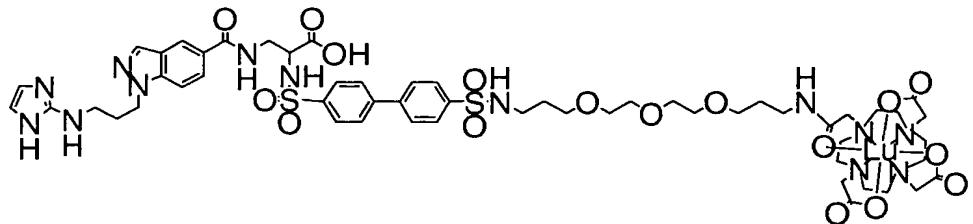
20. A composition according to Claim 19, wherein the targeting moiety is an indazole and the receptor is  $\alpha_v\beta_3$  or  $\alpha_v\beta_5$ .

20 21. A composition according to Claim 20, wherein the radioisotope is  $^{153}\text{Sm}$ .

22. A composition according to Claim 20, wherein the radioisotope is  $^{177}\text{Lu}$ .

25

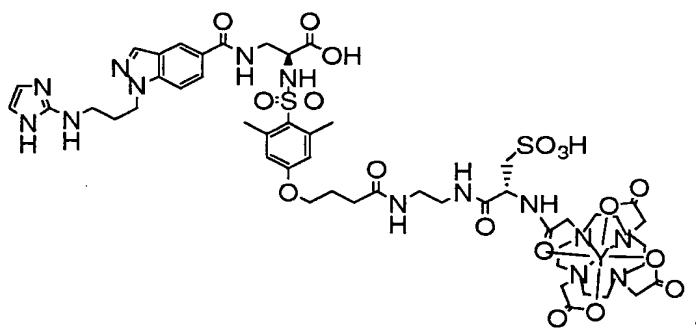
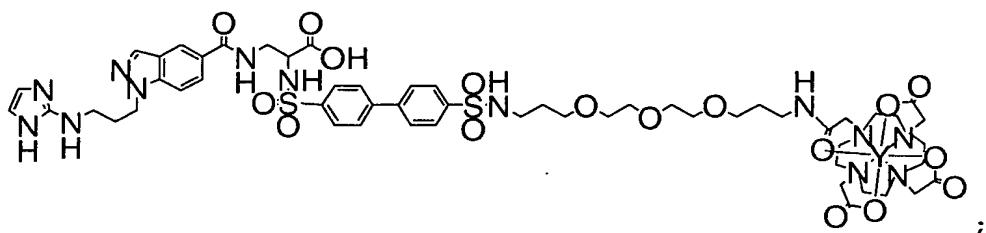
23. A composition according to Claim 22, wherein the radiopharmaceutical is



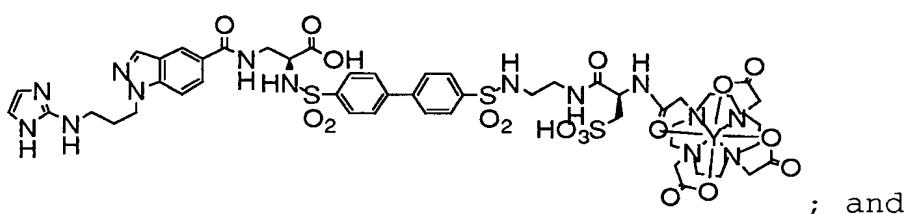
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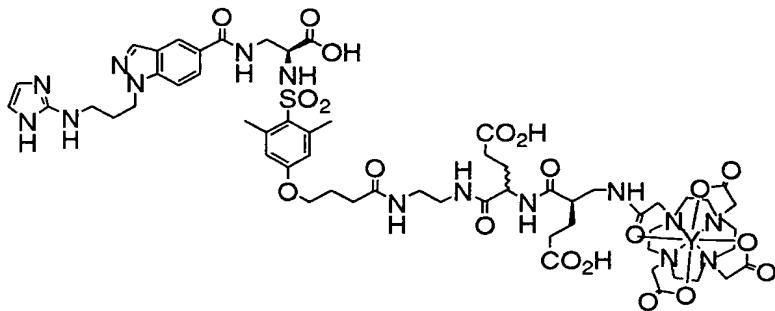
24. A composition according to Claim 20, wherein the radioisotope is  $^{90}\text{Y}$ .

10 25. A composition according to Claim 24, wherein, the radiopharmaceutical is selected from the group:



15





26. A composition according to Claim 11, wherein the metallopharmaceutical is a MRI contrast agent, the metal is a paramagnetic metal ion selected from the group: Gd(III), Dy(III), Fe(III), and Mn(II), the targeting moiety is an indazole nonpeptide and the linking group is present between the targeting moiety and chelator.

5

27. A composition according to Claim 26, wherein the targeting moiety is an indazole and the receptor is  $\alpha_v\beta_3$  or  $\alpha_v\beta_5$ .

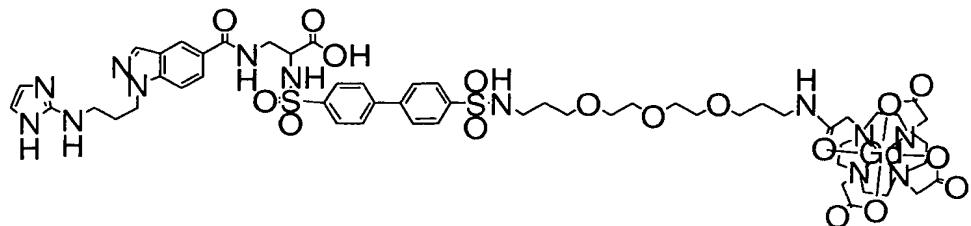
10

28. A composition according to Claim 27, wherein the metal ion is Gd(III).

15

29. A composition according to Claim 28, wherein the contrast agent is

20



30. A composition according to Claim 11, wherein the metallopharmaceutical is a X-ray contrast agent, the metal is selected from the group: Re, Sm, Ho, Lu, Pm, Y, Bi, Pd, Gd, La, Au, Au, Yb, Dy, Cu, Rh, Ag,

25

and Ir, the targeting moiety comprises an indazole, the receptor is  $\alpha_v\beta_3$  or  $\alpha_v\beta_5$ , and the linking group is present between the targeting moiety and chelator.

5 31. A method of treating rheumatoid arthritis in a patient comprising: administering a therapeutic radiopharmaceutical of Claim 19 capable of localizing in new angiogenic vasculature to a patient by injection or infusion.

10 32. A method of treating cancer in a patient comprising: administering to a patient in need thereof a therapeutic radiopharmaceutical of Claim 19 by injection or infusion.

15 33. A method of treating restenosis in a patient comprising: administering to a patient, either systemically or locally, a therapeutic radiopharmaceutical of Claim 19 capable of localizing in the restenotic area and delivering an effective dose of radiation.

20 34. A method of imaging therapeutic angiogenesis in a patient comprising: (1) administering a diagnostic radiopharmaceutical, a MRI contrast agent, or a X-ray contrast agent of Claim 11 to a patient by injection or infusion; (2) imaging the area of the patient wherein the desired formation of new blood vessels is located.

25 35. A method of imaging atherosclerosis in a patient comprising: (1) administering a diagnostic radiopharmaceutical, a MRI contrast agent, or a X-ray contrast agent of Claim 11 to a patient by injection or infusion; (2) imaging the area of the patient wherein the atherosclerosis is located.

36. A method of imaging restenosis in a patient comprising: (1) administering a diagnostic radiopharmaceutical, a MRI contrast agent, or a X-ray contrast agent of Claim 11 to a patient by injection or infusion; (2) imaging the area of the patient wherein the restenosis is located.

5

37. A method of imaging cardiac ischemia in a patient comprising: (1) administering a diagnostic radiopharmaceutical, a MRI contrast agent, or a X-ray contrast agent of Claim 11 to a patient by injection or infusion; (2) imaging the area of the myocardium wherein the ischemic region is located.

10

15 38. A method of imaging myocardial reperfusion injury in a patient comprising: (1) administering a diagnostic radiopharmaceutical, a MRI contrast agent, or a X-ray contrast agent of Claim 11 to a patient by injection or infusion; (2) imaging the area of myocardium wherein the reperfusion injury is located.

20

25 39. A method of imaging cancer in a patient comprising: (1) administering a diagnostic radiopharmaceutical of Claim 12 to a patient by injection or infusion; (2) imaging the patient using planar or SPECT gamma scintigraphy, or positron emission tomography.

30 40. A method of imaging cancer in a patient comprising: (1) administering a MRI contrast agent of Claim 27; and (2) imaging the patient using magnetic resonance imaging.

35 41. A method of imaging cancer in a patient comprising: (1) administering a X-ray contrast agent of Claim 30; and (2) imaging the patient using X-ray computed tomography.

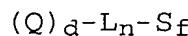
42. A compound, comprising: a targeting moiety and a surfactant, wherein the targeting moiety is bound to the surfactant, is an indazole nonpeptide, and binds to a receptor that is upregulated during

5 angiogenesis and the compound has 0-1 linking groups between the targeting moiety and surfactant.

43. A compound according to Claim 42, wherein the linking group is present between the targeting moiety and surfactant.

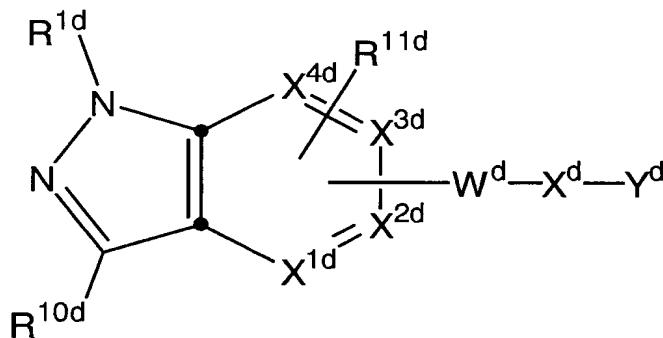
10 44. A compound according to Claim 43, wherein the receptor is the integrin  $\alpha_v\beta_3$  or  $\alpha_v\beta_5$  and the compound is of the formula:

15

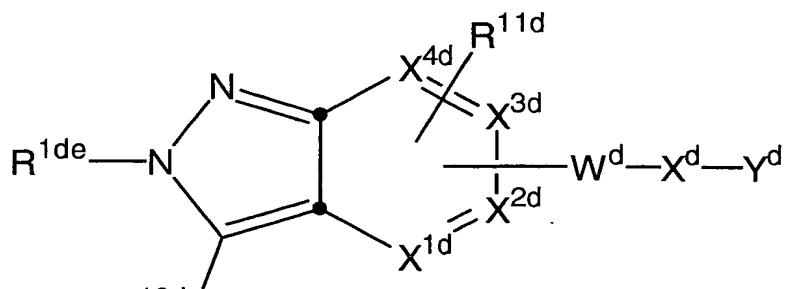


wherein, Q is independently a compound of Formulae (Ia) or (Ib):

20



(Ia)



25

(Ib)

including stereoisomeric forms thereof, or mixtures of stereoisomeric forms thereof, or pharmaceutically acceptable salt or prodrug forms thereof wherein:

5         $X^{1d}$  is N, CH, C- $W^d$ - $X^d$ - $Y^d$ , or C- $L_n$ ;

10         $X^{2d}$  is N, CH, or C- $W^d$ - $X^d$ - $Y^d$ ;

15         $X^{3d}$  is N, CR<sup>11d</sup>, or C- $W^d$ - $X^d$ - $Y^d$ ;

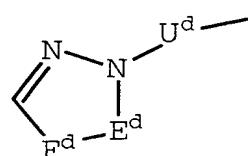
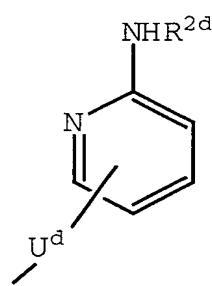
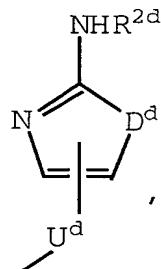
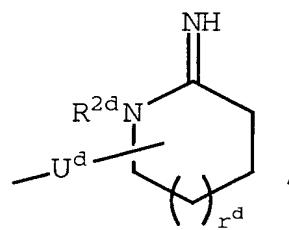
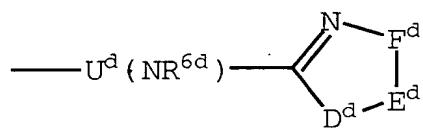
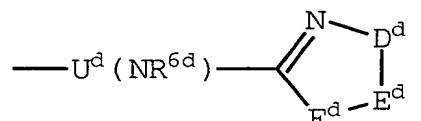
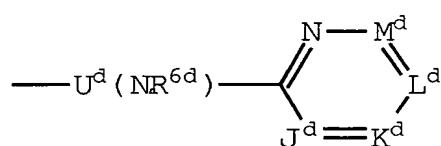
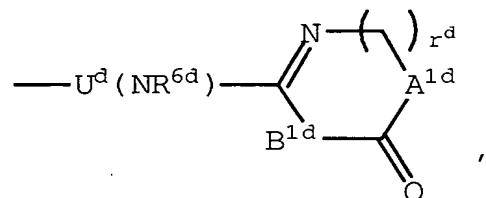
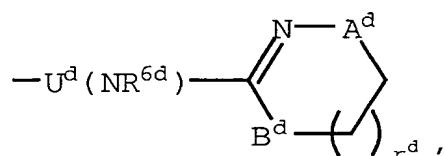
10         $X^{4d}$  is N or CR<sup>11d</sup>;

provided that when  $R^{1d}$  is  $R^{1de}$  then one of  $X^{1d}$  and  $X^{2d}$  is C- $W^d$ - $X^d$ - $Y^d$ , and when  $R^{10d}$  is  $R^{1de}$  then  $X^{3d}$  is C- $W^d$ - $X^d$ - $Y^d$ ;

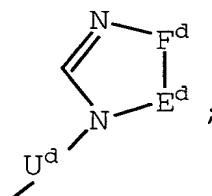
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15         $R^{1d}$  is selected from:  $R^{1de}$ , C<sub>1</sub>-C<sub>6</sub> alkyl substituted with 0-1  $R^{15d}$  or 0-1  $R^{21d}$ , C<sub>3</sub>-C<sub>6</sub> alkenyl substituted with 0-1  $R^{15d}$  or 0-1  $R^{21d}$ , C<sub>3</sub>-C<sub>7</sub> cycloalkyl substituted with 0-1  $R^{15d}$  or 0-1  $R^{21d}$ , C<sub>4</sub>-C<sub>11</sub> cycloalkylalkyl substituted with 0-1  $R^{15d}$  or 0-1  $R^{21d}$ , aryl substituted with 0-1  $R^{15d}$  or 0-2  $R^{11d}$  or 0-1  $R^{21d}$ , and aryl(C<sub>1</sub>-C<sub>6</sub> alkyl)- substituted with 0-1  $R^{15d}$  or 0-2  $R^{11d}$  or 0-1  $R^{21d}$ ;

R<sup>1de</sup> is selected from:



or



5

$A^d$  and  $B^d$  are independently  $-\text{CH}_2-$ ,  $-\text{O}-$ ,  $-\text{N}(\text{R}^{2d})-$ , or  $-\text{C}(=\text{O})-$ ;

$A^{1d}$  and  $B^{1d}$  are independently  $-CH_2-$  or  $-N(R^{3d})-$ ;

$D^d$  is  $-N(R^{2d})-$ ,  $-O-$ ,  $-S-$ ,  $-C(=O)-$  or  $-SO_2-$ ;

5  $E^d-F^d$  is  $-C(R^{4d})=C(R^{5d})-$ ,  $-N=C(R^{4d})-$ ,  $-C(R^{4d})=N-$ , or  $-C(R^{4d})_2C(R^{5d})_2-$ ;

$J^d$ ,  $K^d$ ,  $L^d$  and  $M^d$  are independently selected from:

10  $-C(R^{4d})-$ ,  $-C(R^{5d})-$  and  $-N-$ , provided that at least one of  $J^d$ ,  $K^d$ ,  $L^d$  and  $M^d$  is not  $-N-$ ;

$R^{2d}$  is selected from: H,  $C_1-C_6$  alkyl, ( $C_1-C_6$  alkyl)carbonyl, ( $C_1-C_6$  alkoxy)carbonyl; ( $C_1-C_6$  alkyl)aminocarbonyl,  $C_3-C_6$  alkenyl,  $C_3-C_7$  cycloalkyl,

15  $C_4-C_{11}$  cycloalkylalkyl, aryl, heteroaryl( $C_1-C_6$  alkyl)carbonyl, heteroarylcarbonyl, aryl( $C_1-C_6$  alkyl)-, ( $C_1-C_6$  alkyl)carbonyl-, arylcarbonyl,  $C_1-C_6$  alkylsulfonyl, arylsulfonyl, aryl( $C_1-C_6$  alkyl)sulfonyl, heteroarylsulfonyl, heteroaryl( $C_1-C_6$  alkyl)sulfonyl, aryloxycarbonyl, and aryl( $C_1-C_6$  alkoxy)carbonyl, wherein said aryl groups are substituted with 0-2 substituents selected from the group consisting of  $C_1-C_4$  alkyl,  $C_1-C_4$  alkoxy, halo,  $CF_3$ , and nitro;

25  $R^{3d}$  is selected from: H,  $C_1-C_6$  alkyl,  $C_3-C_7$  cycloalkyl,  $C_4-C_{11}$  cycloalkylalkyl, aryl, aryl( $C_1-C_6$  alkyl)-, and heteroaryl( $C_1-C_6$  alkyl)-;

30  $R^{4d}$  and  $R^{5d}$  are independently selected from: H,  $C_1-C_4$  alkoxy,  $NR^{2d}R^{3d}$ , halogen,  $NO_2$ ,  $CN$ ,  $CF_3$ ,  $C_1-C_6$  alkyl,  $C_3-C_6$  alkenyl,  $C_3-C_7$  cycloalkyl,  $C_4-C_{11}$  cycloalkylalkyl, aryl, aryl( $C_1-C_6$  alkyl)-, ( $C_1-C_6$  alkyl)carbonyl, ( $C_1-C_6$  alkoxy)carbonyl, arylcarbonyl, or

alternatively, when substituents on adjacent atoms,  $R^{4d}$  and  $R^{5d}$  can be taken together with the carbon atoms to which they are attached to form a 5-7 membered carbocyclic or 5-7 membered heterocyclic aromatic or non-aromatic ring system, said carbocyclic or heterocyclic ring being optionally substituted with 0-2 groups selected from:  $C_1-C_4$  alkyl,  $C_1-C_4$  alkoxy, halo, cyano, amino,  $CF_3$ , and  $NO_2$ ;

10  $U^d$  is selected from:

- $(CH_2)_n^{d-}$ ,
- $(CH_2)_n^d(CR^{7d}=CR^{8d})(CH_2)_m^{d-}$ ,
- $(CH_2)_n^d(C\equiv C)(CH_2)_m^{d-}$ ,
- $(CH_2)_t^dQ(CH_2)_m^{d-}$ ,
- 15 -  $(CH_2)_n^dO(CH_2)_m^{d-}$ ,
- $(CH_2)_n^dN(R^{6d})(CH_2)_m^{d-}$ ,
- $(CH_2)_n^dC(=O)(CH_2)_m^{d-}$ ,
- $(CH_2)_n^d(C=O)N(R^{6d})(CH_2)_m^{d-}$
- $(CH_2)_n^dN(R^{6d})(C=O)(CH_2)_m^{d-}$ , and
- 20 -  $(CH_2)_n^dS(O)_p^d(CH_2)_m^{d-}$ ;

wherein one or more of the methylene groups in  $U^d$  is optionally substituted with  $R^{7d}$ ;

25  $Q^d$  is selected from 1,2-cycloalkylene, 1,2-phenylene, 1,3-phenylene, 1,4-phenylene, 2,3-pyridinylene, 3,4-pyridinylene, 2,4-pyridinylene, and 3,4-pyridazinylene;

30  $R^{6d}$  is selected from: H,  $C_1-C_4$  alkyl, or benzyl;

$R^{7d}$  and  $R^{8d}$  are independently selected from: H,  $C_1-C_6$  alkyl,  $C_3-C_7$  cycloalkyl,  $C_4-C_{11}$  cycloalkylalkyl, aryl, aryl( $C_1-C_6$  alkyl)-, and heteroaryl( $C_0-C_6$  alkyl)-;

$R^{10d}$  is selected from: H,  $R^{1de}$ ,  $C_1$ - $C_4$  alkoxy substituted with 0-1  $R^{21d}$ ,  $N(R^{6d})_2$ , halogen,  $NO_2$ , CN,  $CF_3$ ,  $CO_2R^{17d}$ ,  $C(=O)R^{17d}$ ,  $CONR^{17d}R^{20d}$ ,  $-SO_2R^{17d}$ , -

5  $SO_2NR^{17d}R^{20d}$ ,  $C_1$ - $C_6$  alkyl substituted with 0-1  $R^{15d}$  or 0-1  $R^{21d}$ ,  $C_3$ - $C_6$  alkenyl substituted with 0-1  $R^{15d}$  or 0-1  $R^{21d}$ ,  $C_3$ - $C_7$  cycloalkyl substituted with 0-1  $R^{15d}$  or 0-1  $R^{21d}$ ,  $C_4$ - $C_{11}$  cycloalkylalkyl substituted with 0-1  $R^{15d}$  or 0-1  $R^{21d}$ ; aryl substituted with 0-1  $R^{15d}$  or 0-2  $R^{11d}$  or 0-1  $R^{21d}$ , and aryl( $C_1$ - $C_6$  alkyl)-

10 substituted with 0-1  $R^{15d}$  or 0-2  $R^{11d}$  or 0-1  $R^{21d}$ ;

$R^{10de}$  is selected from: H,  $C_1$ - $C_4$  alkoxy substituted with 0-1  $R^{21d}$ ,  $N(R^{6d})_2$ , halogen,  $NO_2$ , CN,  $CF_3$ ,  $CO_2R^{17d}$ ,  $C(=O)R^{17d}$ ,  $CONR^{17d}R^{20d}$ ,  $-SO_2R^{17d}$ ,  $-SO_2NR^{17d}R^{20d}$ ,  $C_1$ - $C_6$

15 alkyl substituted with 0-1  $R^{15d}$  or 0-1  $R^{21d}$ ,  $C_3$ - $C_6$  alkenyl substituted with 0-1  $R^{15d}$  or 0-1  $R^{21d}$ ,  $C_3$ - $C_7$  cycloalkyl substituted with 0-1  $R^{15d}$  or 0-1  $R^{21d}$ ,  $C_4$ - $C_{11}$  cycloalkylalkyl substituted with 0-1  $R^{15d}$  or 0-1  $R^{21d}$ , aryl substituted with 0-1  $R^{15d}$  or 0-2  $R^{11d}$  or 0-1  $R^{21d}$ , and aryl( $C_1$ - $C_6$  alkyl)- substituted with 0-1  $R^{15d}$  or 0-2  $R^{11d}$  or 0-1  $R^{21d}$ ;

$R^{11d}$  is selected from H, halogen,  $CF_3$ , CN,  $NO_2$ , hydroxy,  $NR^{2d}R^{3d}$ ,  $C_1$ - $C_4$  alkyl substituted with 0-1  $R^{21d}$ ,  $C_1$ - $C_4$

25 alkoxy substituted with 0-1  $R^{21d}$ , aryl substituted with 0-1  $R^{21d}$ , aryl( $C_1$ - $C_6$  alkyl)- substituted with 0-1  $R^{21d}$ , ( $C_1$ - $C_4$  alkoxy)carbonyl substituted with 0-1  $R^{21d}$ , ( $C_1$ - $C_4$  alkyl)carbonyl substituted with 0-1  $R^{21d}$ ,  $C_1$ - $C_4$  alkylsulfonyl substituted with 0-1  $R^{21d}$ , and  $C_1$ - $C_4$  alkylaminosulfonyl substituted with 0-1  $R^{21d}$ ;

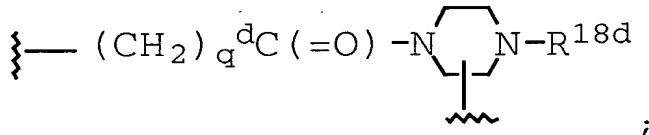
$W^d$  is selected from:

-  $(C(R^{12d})_2)_q^dC(=O)N(R^{13d})-$ , and  
-  $C(=O)-N(R^{13d})-(C(R^{12d})_2)_q^d-$ ;

$X^d$  is  $-C(R^{12d})(R^{14d})-C(R^{12d})(R^{15d})-$ ; or

alternatively,  $W^d$  and  $X^d$  can be taken together to be

5



$R^{12d}$  is selected from H, halogen, C<sub>1</sub>-C<sub>6</sub> alkyl, C<sub>2</sub>-C<sub>6</sub> alkenyl, C<sub>2</sub>-C<sub>6</sub> alkynyl, C<sub>3</sub>-C<sub>7</sub> cycloalkyl,

10 C<sub>4</sub>-C<sub>10</sub> cycloalkylalkyl, (C<sub>1</sub>-C<sub>4</sub> alkyl)carbonyl, aryl, and aryl(C<sub>1</sub>-C<sub>6</sub> alkyl)-;

$R^{13d}$  is selected from H, C<sub>1</sub>-C<sub>6</sub> alkyl, C<sub>3</sub>-C<sub>7</sub> cycloalkylmethyl, and aryl(C<sub>1</sub>-C<sub>6</sub> alkyl)-;

15

$R^{14d}$  is selected from:

H, C<sub>1</sub>-C<sub>6</sub> alkylthio(C<sub>1</sub>-C<sub>6</sub> alkyl)-, aryl(C<sub>1</sub>-C<sub>10</sub> alkylthioalkyl)-, aryl(C<sub>1</sub>-C<sub>10</sub> alkoxyalkyl)-, C<sub>1</sub>-C<sub>10</sub> alkyl,

20 C<sub>1</sub>-C<sub>10</sub> alkoxyalkyl, C<sub>1</sub>-C<sub>6</sub> hydroxyalkyl, C<sub>2</sub>-C<sub>10</sub> alkenyl, C<sub>2</sub>-C<sub>10</sub> alkynyl, C<sub>3</sub>-C<sub>10</sub> cycloalkyl, C<sub>3</sub>-C<sub>10</sub> cycloalkylalkyl,

aryl(C<sub>1</sub>-C<sub>6</sub> alkyl)-, heteroaryl(C<sub>1</sub>-C<sub>6</sub> alkyl)-, aryl, heteroaryl, CO<sub>2</sub>R<sup>17d</sup>, C(=O)R<sup>17d</sup>, and

CONR<sup>17d</sup>R<sup>20d</sup>, provided that any of the above alkyl, cycloalkyl, aryl or heteroaryl groups may be

25 unsubstituted or substituted independently with 0-1 R<sup>16d</sup> or 0-2 R<sup>11d</sup>;

$R^{15d}$  is selected from:

H, R<sup>16d</sup>, C<sub>1</sub>-C<sub>10</sub> alkyl, C<sub>1</sub>-C<sub>10</sub> alkoxyalkyl,

30 C<sub>1</sub>-C<sub>10</sub> alkylaminoalkyl, C<sub>1</sub>-C<sub>10</sub> dialkylaminoalkyl, (C<sub>1</sub>-C<sub>10</sub> alkyl)carbonyl, aryl(C<sub>1</sub>-C<sub>6</sub> alkyl)carbonyl, C<sub>1</sub>-C<sub>10</sub> alkenyl, C<sub>1</sub>-C<sub>10</sub> alkynyl, C<sub>3</sub>-C<sub>10</sub> cycloalkyl, C<sub>3</sub>-C<sub>10</sub> cycloalkylalkyl, aryl(C<sub>1</sub>-C<sub>6</sub> alkyl)-, heteroaryl(C<sub>1</sub>-C<sub>6</sub> alkyl)-, aryl, heteroaryl, CO<sub>2</sub>R<sup>17d</sup>,

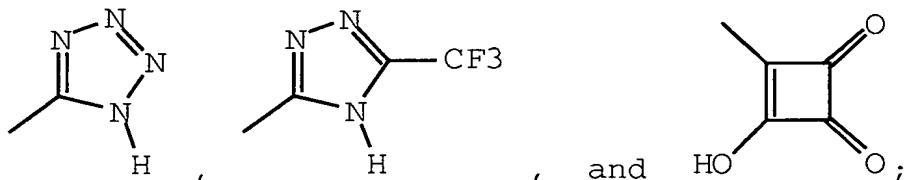
$C(=O)R^{17d}$ ,  $CONR^{17d}R^{20d}$ ,  $SO_2R^{17d}$ , and  $SO_2NR^{17d}R^{20d}$ , provided that any of the above alkyl, cycloalkyl, aryl or heteroaryl groups may be unsubstituted or substituted independently with 0-2  $R^{11d}$ ;

5

$Y^d$  is selected from:

$-COR^{19d}$ ,  $-SO_3H$ ,  $-PO_3H$ , tetrazolyl,  $-CONHNHSO_2CF_3$ ,  $-CONHSO_2R^{17d}$ ,  $-CONHSO_2NHR^{17d}$ ,  $-NHCOCF_3$ ,  $-NHCONHSO_2R^{17d}$ ,  $-NHSO_2R^{17d}$ ,  $-OPO_3H_2$ ,  $-OSO_3H$ ,  $-PO_3H_2$ ,  $-SO_3H$ ,  $-SO_2NHCOR^{17d}$ ,  $-SO_2NHCO_2R^{17d}$ ,

10

15  $R^{16d}$  is selected from:

$-N(R^{20d})-C(=O)-O-R^{17d}$ ,  
 $-N(R^{20d})-C(=O)-R^{17d}$ ,  
 $-N(R^{20d})-C(=O)-NH-R^{17d}$ ,  
 $-N(R^{20d})SO_2-R^{17d}$ , and  
 $20 -N(R^{20d})SO_2-NR^{20d}R^{17d}$ ;

$R^{17d}$  is selected from:

$C_1-C_{10}$  alkyl optionally substituted with a bond to  $L_n$ ,  $C_3-C_{11}$  cycloalkyl optionally substituted with a bond to  $L_n$ , aryl( $C_1-C_6$  alkyl)- optionally substituted with a bond to  $L_n$ , ( $C_1-C_6$  alkyl)aryl optionally substituted with a bond to  $L_n$ , heteroaryl( $C_1-C_6$  alkyl)- optionally substituted with a bond to  $L_n$ , ( $C_1-C_6$  alkyl)heteroaryl optionally substituted with a bond to  $L_n$ , biaryl( $C_1-C_6$  alkyl)- optionally substituted with a bond to  $L_n$ , heteroaryl optionally substituted with a bond to  $L_n$ , aryl optionally substituted with a bond to  $L_n$ , biaryl optionally substituted with a bond to  $L_n$ .

substituted with a bond to  $L_n$ , and a bond to  $L_n$ ,  
 wherein said aryl, biaryl or heteroaryl groups are  
 also optionally substituted with 0-3 substituents  
 selected from the group:  $C_1-C_4$  alkyl,  $C_1-C_4$  alkoxy,  
 5 aryl, heteroaryl, halo, cyano, amino,  $CF_3$ , and  $NO_2$ ;

$R^{18d}$  is selected from:

-H,  
 $-C(=O)-O-R^{17d}$ ,  
 10  $-C(=O)-R^{17d}$ ,  
 $-C(=O)-NH-R^{17d}$ ,  
 $-SO_2-R^{17d}$ , and  
 $-SO_2-NR^{20d}R^{17d}$ ;

15  $R^{19d}$  is selected from: hydroxy,  $C_1-C_{10}$  alkyloxy,  
 $C_3-C_{11}$  cycloalkyloxy, aryloxy, aryl( $C_1-C_6$  alkoxy)-,  
 $C_3-C_{10}$  alkylcarbonyloxyalkyloxy,  $C_3-C_{10}$   
 alkoxy carbonyloxyalkyloxy,  
 $C_2-C_{10}$  alkoxy carbonylalkyloxy,  
 20  $C_5-C_{10}$  cycloalkylcarbonyloxyalkyloxy,  
 $C_5-C_{10}$  cycloalkoxycarbonyloxyalkyloxy,  
 $C_5-C_{10}$  cycloalkoxycarbonylalkyloxy,  
 $C_7-C_{11}$  aryloxycarbonylalkyloxy,  
 $C_8-C_{12}$  aryloxycarbonyloxyalkyloxy,  
 25  $C_8-C_{12}$  arylcarbonyloxyalkyloxy,  
 $C_5-C_{10}$  alkoxyalkylcarbonyloxyalkyloxy,  
 $C_5-C_{10}$  (5-alkyl-1,3-dioxa-cyclopenten-2-one-  
 yl)methyloxy,  $C_{10}-C_{14}$  (5-aryl-1,3-dioxa-cyclopenten-  
 2-one-yl)methyloxy, and  
 30  $(R^{11d})(R^{12d})N-(C_1-C_{10}$  alkoxy)-;

$R^{20d}$  is selected from: H,  $C_1-C_6$  alkyl,  $C_3-C_7$  cycloalkyl,  
 $C_4-C_{11}$  cycloalkylalkyl, aryl, aryl( $C_1-C_6$  alkyl)-, and  
 heteroaryl( $C_1-C_6$  alkyl)-;

35

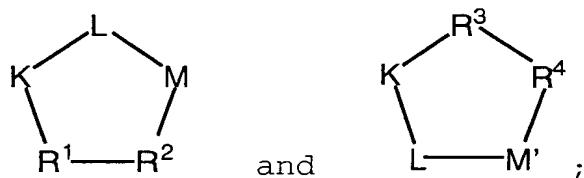
$R^{21d}$  is selected from: COOH and  $NR^{6d}{}_2$ ;

$m^d$  is 0-4;  
 $n^d$  is 0-4;  
 $t^d$  is 0-4;  
 $p^d$  is 0-2;  
5  $q^d$  is 0-2; and  
 $r^d$  is 0-2;

with the following provisos:

10 (1)  $t^d$ ,  $n^d$ ,  $m^d$  and  $q^d$  are chosen such that the number of atoms connecting  $R^{1d}$  and  $Y^d$  is in the range of 10-14;  
 and  
 (2)  $n^d$  and  $m^d$  are chosen such that the value of  $n^d$  plus  
 $m^d$  is greater than one unless  $U^d$  is  
 $-(CH_2)_t^d Q^d (CH_2)_m^d$ ;  
15

or Q is a peptide selected from the group:



20  $R^1$  is L-valine, D-valine or L-lysine optionally substituted on the  $\epsilon$  amino group with a bond to  $L_n$ ;  
 $R^2$  is L-phenylalanine, D-phenylalanine,  
 D-1-naphthylalanine, 2-aminothiazole-4-acetic acid  
 or tyrosine, the tyrosine optionally substituted on  
25 the hydroxy group with a bond to  $L_n$ ;

$R^3$  is D-valine;

R<sup>4</sup> is D-tyrosine substituted on the hydroxy group with a bond to L<sub>n</sub>;

provided that one of R<sup>1</sup> and R<sup>2</sup> in each Q is substituted with a bond to L<sub>n</sub>, and further provided that when R<sup>2</sup> is 2-aminothiazole-4-acetic acid, K is N-methylarginine;

provided that at least one Q is a compound of Formula Ia or Ib;

d is selected from 1, 2, 3, 4, 5, 6, 7, 8, 9, and 10;

L<sub>n</sub> is a linking group having the formula:

((W)<sub>h</sub>-(CR<sup>6</sup>R<sup>7</sup>)<sub>g</sub>)<sub>x</sub>-(Z)<sub>k</sub>-((CR<sup>6a</sup>R<sup>7a</sup>)<sub>g'</sub>-(W)<sub>h'</sub>)<sub>x'</sub>;

W is independently selected at each occurrence from the group: O, S, NH, NHC(=O), C(=O)NH, NR<sup>8</sup>C(=O), C(=O)N R<sup>8</sup>, C(=O), C(=O)O, OC(=O), NHC(=S)NH, NHC(=O)NH, SO<sub>2</sub>, SO<sub>2</sub>NH, (OCH<sub>2</sub>CH<sub>2</sub>)<sub>20-200</sub>, (CH<sub>2</sub>CH<sub>2</sub>O)<sub>20-200</sub>, (OCH<sub>2</sub>CH<sub>2</sub>CH<sub>2</sub>)<sub>20-200</sub>, (CH<sub>2</sub>CH<sub>2</sub>CH<sub>2</sub>O)<sub>20-200</sub>, and (aa)<sub>t'</sub>;

aa is independently at each occurrence an amino acid;

Z is selected from the group: aryl substituted with 0-3 R<sup>10</sup>, C<sub>3-10</sub> cycloalkyl substituted with 0-3 R<sup>10</sup>, and a 5-10 membered heterocyclic ring system containing 1-4 heteroatoms independently selected from N, S, and O and substituted with 0-3 R<sup>10</sup>;

R<sup>6</sup>, R<sup>6a</sup>, R<sup>7</sup>, R<sup>7a</sup>, and R<sup>8</sup> are independently selected at each occurrence from the group: H, =O, COOH, SO<sub>3</sub>H, PO<sub>3</sub>H, C<sub>1-C5</sub> alkyl substituted with 0-3 R<sup>10</sup>, aryl substituted with 0-3 R<sup>10</sup>, benzyl substituted with 0-3 R<sup>10</sup>, and C<sub>1-C5</sub> alkoxy substituted with 0-3 R<sup>10</sup>, NHC(=O)R<sup>11</sup>, C(=O)NHR<sup>11</sup>, NHC(=O)NHR<sup>11</sup>, NHR<sup>11</sup>, R<sup>11</sup>, and a bond to S<sub>f</sub>;

$R^{10}$  is independently selected at each occurrence from the group: a bond to  $S_f$ ,  $COOR^{11}$ ,  $C(=O)NHR^{11}$ ,  $NHC(=O)R^{11}$ ,  $OH$ ,  $NHR^{11}$ ,  $SO_3H$ ,  $PO_3H$ ,  $-OPO_3H_2$ ,  $-OSO_3H$ , aryl substituted with 0-3  $R^{11}$ ,  $C_{1-5}$  alkyl substituted with 0-1  $R^{12}$ ,  $C_{1-5}$  alkoxy substituted with 0-1  $R^{12}$ , and a 5-10 membered heterocyclic ring system containing 1-4 heteroatoms independently selected from N, S, and O and substituted with 0-3  $R^{11}$ ;

$R^{11}$  is independently selected at each occurrence from the group: H, alkyl substituted with 0-1  $R^{12}$ , aryl substituted with 0-1  $R^{12}$ , a 5-10 membered heterocyclic ring system containing 1-4 heteroatoms independently selected from N, S, and O and substituted with 0-1  $R^{12}$ ,  $C_{3-10}$  cycloalkyl substituted with 0-1  $R^{12}$ , and a bond to  $S_f$ ;

$R^{12}$  is a bond to  $S_f$ ;

$k$  is selected from 0, 1, and 2;  
 $h$  is selected from 0, 1, and 2;  
 $h'$  is selected from 0, 1, and 2;  
 $g$  is selected from 0, 1, 2, 3, 4, 5, 6, 7, 8, 9, and 10;  
 $g'$  is selected from 0, 1, 2, 3, 4, 5, 6, 7, 8, 9, and 10;  
 $t'$  is selected from 0, 1, 2, 3, 4, 5, 6, 7, 8, 9, and 10;  
 $x$  is selected from 0, 1, 2, 3, 4, and 5;  
 $x'$  is selected from 0, 1, 2, 3, 4, and 5;

$S_f$  is a surfactant which is a lipid or a compound of the formula:  $A^9-E^1-A^{10}$ ;

$A^9$  is selected from the group: OH and  $OR^{27}$ ;

$A^{10}$  is  $OR^{27}$ ;

R<sup>27</sup> is C(=O)C<sub>1-20</sub> alkyl;

E<sup>1</sup> is C<sub>1-10</sub> alkylene substituted with 1-3 R<sup>28</sup>;

5 R<sup>28</sup> is independently selected at each occurrence from the group: R<sup>30</sup>, -PO<sub>3</sub>H-R<sup>30</sup>, =O, -CO<sub>2</sub>R<sup>29</sup>, -C(=O)R<sup>29</sup>, -C(=O)N(R<sup>29</sup>)<sub>2</sub>, -CH<sub>2</sub>OR<sup>29</sup>, -OR<sup>29</sup>, -N(R<sup>29</sup>)<sub>2</sub>, C<sub>1-C5</sub> alkyl, and C<sub>2-C4</sub> alkenyl;

10 R<sup>29</sup> is independently selected at each occurrence from the group: R<sup>30</sup>, H, C<sub>1-C6</sub> alkyl, phenyl, benzyl, and trifluoromethyl;

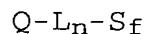
*Expressed* 15 R<sup>30</sup> is a bond to L<sub>n</sub>;

*and* *2/1/03* *and* *-- oe --*

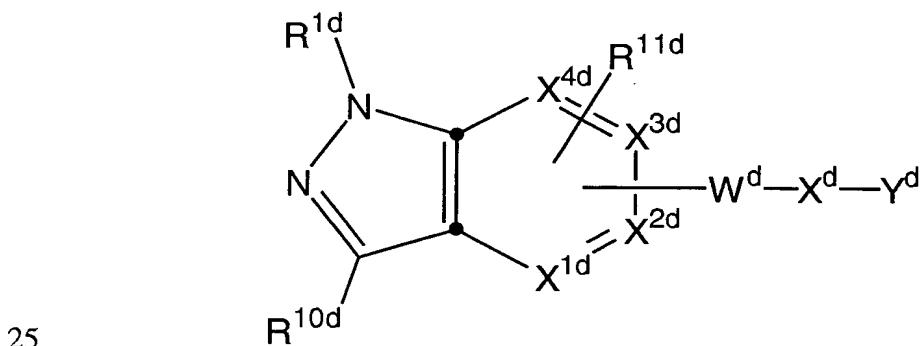
and a pharmaceutically acceptable salt thereof.

45. A compound according to Claim 44, wherein the compound is of the formula:

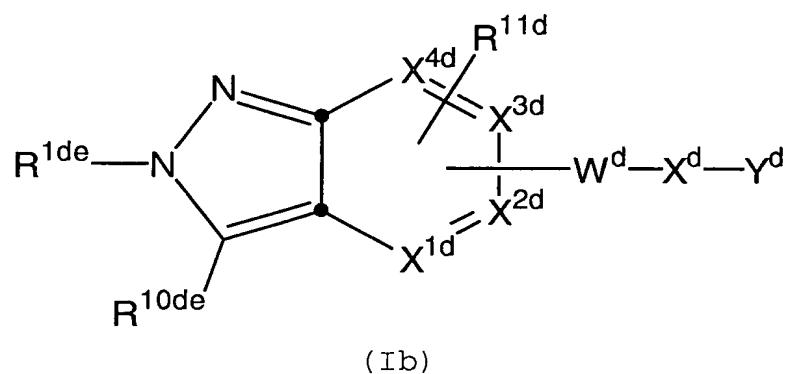
20



wherein: Q is a compound of Formula (Ia) or (Ib):

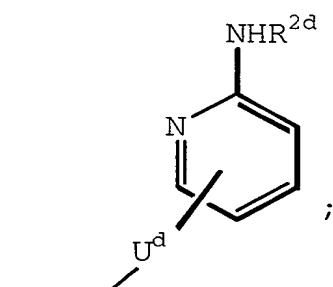
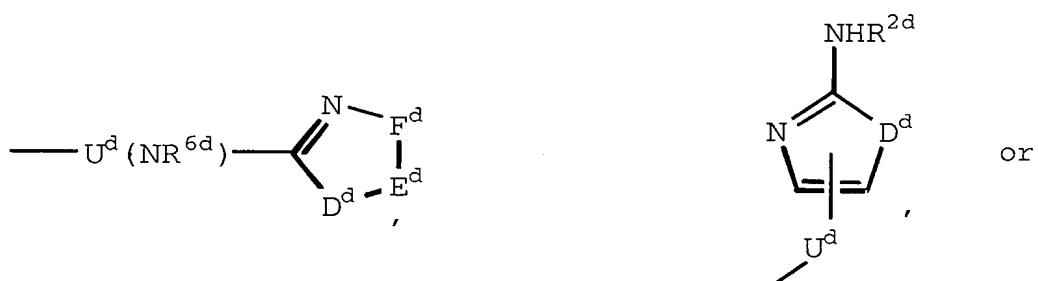
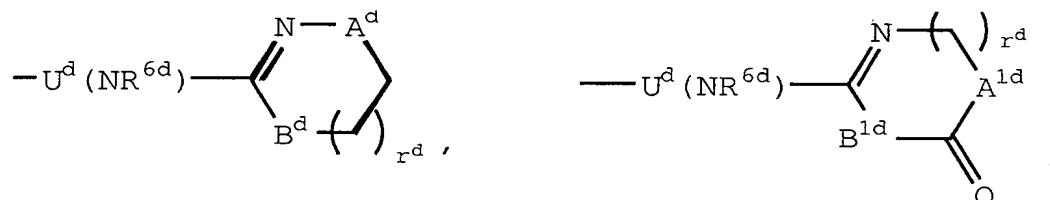


(Ia)



$R^{1de}$  is selected from:

5



$A^d$  and  $B^d$  are independently  $-CH_2-$ ,  $-O-$ ,  $-N(R^{2d})-$ , or  $-C(=O)-$ ;

$A^{1d}$  and  $B^{1d}$  are independently  $-CH_2-$  or  $-N(R^{3d})-$ ;

5  $D^d$  is  $-N(R^{2d})-$ ,  $-O-$ ,  $-S-$ ,  $-C(=O)-$  or  $-SO_2-$ ;

$E^d - F^d$  is  $-C(R^{4d})=C(R^{5d})-$ ,  $-N=C(R^{4d})-$ ,  $-C(R^{4d})=N-$ , or  $-C(R^{4d})_2C(R^{5d})_2-$ ;

10  $J^d$ ,  $K^d$ ,  $L^d$  and  $M^d$  are independently selected from:  
 $-C(R^{4d})-$ ,  $-C(R^{5d})-$  and  $-N-$ , provided that at least  
one of  $J^d$ ,  $K^d$ ,  $L^d$  and  $M^d$  is not  $-N-$ ;

15  $R^{2d}$  is selected from: H, C<sub>1</sub>-C<sub>6</sub> alkyl, (C<sub>1</sub>-C<sub>6</sub>  
alkyl)carbonyl, (C<sub>1</sub>-C<sub>6</sub> alkoxy)carbonyl, C<sub>1</sub>-C<sub>6</sub>  
alkylaminocarbonyl, C<sub>3</sub>-C<sub>6</sub> alkenyl, C<sub>3</sub>-C<sub>7</sub> cycloalkyl,  
C<sub>4</sub>-C<sub>11</sub> cycloalkylalkyl, aryl, heteroaryl(C<sub>1</sub>-C<sub>6</sub>  
alkyl)carbonyl, heteroarylcarbonyl, aryl(C<sub>1</sub>-C<sub>6</sub>  
alkyl)-, (C<sub>1</sub>-C<sub>6</sub> alkyl)carbonyl, arylcarbonyl,  
20 alkylsulfonyl, arylsulfonyl, aryl(C<sub>1</sub>-C<sub>6</sub>  
alkyl)sulfonyl, heteroarylsulfonyl, heteroaryl(C<sub>1</sub>-C<sub>6</sub>  
alkyl)sulfonyl, aryloxycarbonyl, and aryl(C<sub>1</sub>-C<sub>6</sub>  
alkoxy)carbonyl, wherein said aryl groups are  
25 substituted with 0-2 substituents selected from the  
group: C<sub>1</sub>-C<sub>4</sub> alkyl, C<sub>1</sub>-C<sub>4</sub> alkoxy, halo, CF<sub>3</sub>, and  
nitro;

30  $R^{3d}$  is selected from: H, C<sub>1</sub>-C<sub>6</sub> alkyl, C<sub>3</sub>-C<sub>7</sub> cycloalkyl,  
C<sub>4</sub>-C<sub>11</sub> cycloalkylalkyl, aryl, aryl(C<sub>1</sub>-C<sub>6</sub> alkyl)-, and  
heteroaryl(C<sub>1</sub>-C<sub>6</sub> alkyl)-;

35  $R^{4d}$  and  $R^{5d}$  are independently selected from: H, C<sub>1</sub>-C<sub>4</sub>  
alkoxy, NR<sup>2d</sup>R<sup>3d</sup>, halogen, NO<sub>2</sub>, CN, CF<sub>3</sub>, C<sub>1</sub>-C<sub>6</sub> alkyl,  
C<sub>3</sub>-C<sub>6</sub> alkenyl, C<sub>3</sub>-C<sub>7</sub> cycloalkyl, C<sub>4</sub>-C<sub>11</sub>

cycloalkylalkyl, aryl, aryl(C<sub>1</sub>-C<sub>6</sub> alkyl)-, C<sub>2</sub>-C<sub>7</sub> alkylcarbonyl, and arylcarbonyl or

alternatively, when substituents on adjacent atoms, R<sup>4d</sup> and R<sup>5d</sup> can be taken together with the carbon atoms to which they are attached to form a 5-7 membered carbocyclic or 5-7 membered heterocyclic aromatic or non-aromatic ring system, said carbocyclic or heterocyclic ring being optionally substituted with 0-2 groups selected from: C<sub>1</sub>-C<sub>4</sub> alkyl, C<sub>1</sub>-C<sub>4</sub> alkoxy, halo, cyano, amino, CF<sub>3</sub>, and NO<sub>2</sub>;

U<sup>d</sup> is selected from:

- (CH<sub>2</sub>)<sub>n</sub><sup>d</sup> - ,

- (CH<sub>2</sub>)<sub>n</sub><sup>d</sup> (CR<sup>7d</sup>=CR<sup>8d</sup>) (CH<sub>2</sub>)<sub>m</sub><sup>d</sup> - ,

15 - (CH<sub>2</sub>)<sub>t</sub><sup>d</sup> Q<sup>d</sup> (CH<sub>2</sub>)<sub>m</sub><sup>d</sup> - ,

- (CH<sub>2</sub>)<sub>n</sub><sup>d</sup> O (CH<sub>2</sub>)<sub>m</sub><sup>d</sup> - ,

- (CH<sub>2</sub>)<sub>n</sub><sup>d</sup> N (R<sup>6d</sup>) (CH<sub>2</sub>)<sub>m</sub><sup>d</sup> - ,

- (CH<sub>2</sub>)<sub>n</sub><sup>d</sup> C (=O) (CH<sub>2</sub>)<sub>m</sub><sup>d</sup> - , and

- (CH<sub>2</sub>)<sub>n</sub><sup>d</sup> S (O)<sub>p</sub><sup>d</sup> (CH<sub>2</sub>)<sub>m</sub><sup>d</sup> - ;

20

wherein one or more of the methylene groups in U<sup>d</sup> is optionally substituted with R<sup>7d</sup>;

25

Q<sup>d</sup> is selected from 1,2-phenylene, 1,3-phenylene, 2,3-pyridinylene, 3,4-pyridinylene, and 2,4-pyridinylene;

R<sup>6d</sup> is selected from: H, C<sub>1</sub>-C<sub>4</sub> alkyl, and benzyl;

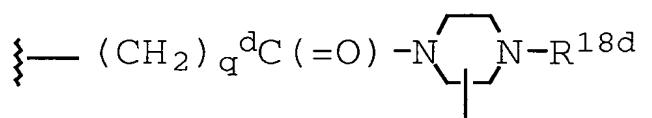
30 R<sup>7d</sup> and R<sup>8d</sup> are independently selected from: H, C<sub>1</sub>-C<sub>6</sub> alkyl, C<sub>3</sub>-C<sub>7</sub> cycloalkyl, C<sub>4</sub>-C<sub>11</sub> cycloalkylalkyl,

aryl, aryl(C<sub>1</sub>-C<sub>6</sub> alkyl)-, and heteroaryl(C<sub>0</sub>-C<sub>6</sub> alkyl)-;

5       $W^d$  is  $-C(=O)-N(R^{13d})-(C(R^{12d})_2)_q^d-$ ;

10       $X^d$  is  $-C(R^{12d})(R^{14d})-C(R^{12d})(R^{15d})-$ ;

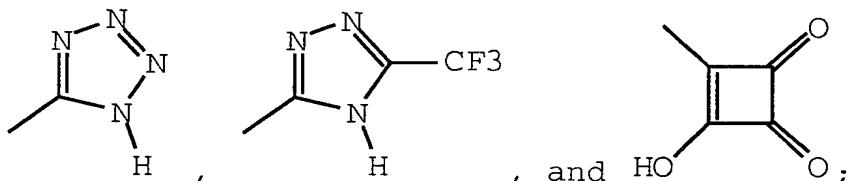
alternatively,  $W^d$  and  $X^d$  can be taken together to be



20       $R^{12d}$  is H or C<sub>1</sub>-C<sub>6</sub> alkyl;

25       $Y^d$  is selected from:

15       $-COR^{19d}$ ,  $-SO_3H$ ,



25      Z is selected from the group: aryl substituted with 0-1  $R^{10}$ , C<sub>3</sub>-10 cycloalkyl substituted with 0-1  $R^{10}$ , and a 5-10 membered heterocyclic ring system containing 1-4 heteroatoms independently selected from N, S, and O and substituted with 0-1  $R^{10}$ ;

30       $R^6$ ,  $R^{6a}$ ,  $R^7$ ,  $R^{7a}$ , and  $R^8$  are independently selected at each occurrence from the group: H,  $=O$ , COOH,  $SO_3H$ , C<sub>1</sub>-C<sub>5</sub> alkyl substituted with 0-1  $R^{10}$ , aryl substituted with 0-1  $R^{10}$ , benzyl substituted with 0-1  $R^{10}$ , and C<sub>1</sub>-C<sub>5</sub> alkoxy substituted with 0-1  $R^{10}$ ,

NHC(=O)R<sup>11</sup>, C(=O)NHR<sup>11</sup>, NHC(=O)NHR<sup>11</sup>, NHR<sup>11</sup>, R<sup>11</sup>, and a bond to S<sub>f</sub>;

k is 0 or 1;

5

S<sub>f</sub> is a surfactant which is a lipid or a compound of the formula: A<sup>9</sup>-E<sup>1</sup>-A<sup>10</sup>;

A<sup>9</sup> is OR<sup>27</sup>;

10

A<sup>10</sup> is OR<sup>27</sup>;

R<sup>27</sup> is C(=O)C<sub>1-15</sub> alkyl;

15

E<sup>1</sup> is C<sub>1-4</sub> alkylene substituted with 1-3 R<sup>28</sup>;

R<sup>28</sup> is independently selected at each occurrence from the group: R<sup>30</sup>, -PO<sub>3</sub>H-R<sup>30</sup>, =O, -CO<sub>2</sub>R<sup>29</sup>, -C(=O)R<sup>29</sup>,

20

-CH<sub>2</sub>OR<sup>29</sup>, -OR<sup>29</sup>, and C<sub>1-C5</sub> alkyl;

R<sup>29</sup> is independently selected at each occurrence from the group: R<sup>30</sup>, H, C<sub>1-C6</sub> alkyl, phenyl, and benzyl;

25

R<sup>30</sup> is a bond to L<sub>n</sub>;

*Annotated  
J-21-13 [and] --oe--*  
and a pharmaceutically acceptable salt thereof.

30

46. A compound according to Claim 45, wherein the present invention provides a compound selected from the group:

DPPE-2-(6-aminohexanoylamino)-3-((1-(3-(imidazol-2-ylamino)propyl)(1H-indazol-5-yl))carbonyl-amino)propanoic acid-dodecanoate conjugate;

ω-amino-PEG<sub>3400</sub>-2-(6-aminohexanoylamino)-3-((1-(3-(imidazol-2-ylamino)propyl)(1H-indazol-5-yl)carbonyl-amino)propanoic acid; and

5

ω-amino-PEG<sub>3400</sub>-Glu-(2-(6-aminohexanoylamino)-3-((1-(3-(imidazol-2-ylamino)-propyl)(1H-indazol-5-yl)carbonyl-amino)propanoic acid)<sub>2</sub>.

10 47. An ultrasound contrast agent composition, comprising:

(a) a compound of Claim 44, comprising: an indazole that binds to the integrin  $\alpha_v\beta_3$  or  $\alpha_v\beta_5$  a surfactant and a linking group between the indazole and the surfactant;

(b) a parenterally acceptable carrier; and,

(c) an echogenic gas.

15 48. An ultrasound contrast agent composition of Claim 47, further comprising: 1,2-dipalmitoyl-sn-glycero-3-phosphatidic acid, 1,2-dipalmitoyl-sn-glycero-3-phosphatidylcholine, and N-(methoxypolyethylene glycol 5000 carbamoyl)-1,2-dipalmitoyl-sn-glycero-3-phosphatidylethanolamine.

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49. An ultrasound contrast agent composition of Claim 48, wherein the echogenic gas is a C<sub>2-5</sub> perfluorocarbon.

30 50. A method of imaging cancer in a patient comprising:  
(1) administering, by injection or infusion, a ultrasound contrast agent composition of Claim 44 to a patient; and (2) imaging the patient using sonography.

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51. A method of imaging therapeutic angiogenesis in a patient comprising: (1) administering, by injection

or infusion, an ultrasound contrast agent composition of Claim 42 to a patient; (2) imaging the area of the patient wherein the desired formation of new blood vessels is located.

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52. A method of imaging atherosclerosis in a patient comprising: (1) administering, by injection or infusion, an ultrasound contrast agent composition of Claim 42 to a patient; (2) imaging the area of the patient wherein the atherosclerosis is located.

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53. A method of imaging restenosis in a patient comprising: (1) administering, by injection or infusion, an ultrasound contrast agent composition of Claim 42 to a patient; (2) imaging the area of the patient wherein the restenosis is located.

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54. A method of imaging cardiac ischemia in a patient comprising: (1) administering, by injection or infusion, an ultrasound contrast agent composition of Claim 42 to a patient; (2) imaging the area of the myocardium wherein the ischemic region is located.

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25 55. A method of imaging myocardial reperfusion injury in a patient comprising: (1) administering, by injection or infusion, an ultrasound contrast agent composition of Claim 42 to a patient; (2) imaging the area of myocardium wherein the reperfusion injury is located.

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56. A therapeutic radiopharmaceutical composition, comprising:  
(a) a therapeutic radiopharmaceutical of Claim 19;  
35 and,  
(b) a parenterally acceptable carrier.

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57. A diagnostic pharmaceutical composition, comprising:

- (a) a diagnostic radiopharmaceutical, a MRI contrast agent, or a X-ray contrast agent of Claim 11; and,
- (b) a parenterally acceptable carrier.